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CONTENTS

ORIGINAL ARTICLES

	PAGE
Personal Hygiene for Troops in the Field. *Maurice L. Blatt, M. D., Chicago*	129
Suggestions for the Prevention and Control of Venereal Diseases in the Army. *A. E. Mowry, M. D., Chicago*	134
The Importance of Early and Efficient Doses of Antitoxin in Diphtheria. *Edward K. Armstrong, M. D., Chicago*	139
Early Diagnosis of Carcinoma of the Stomach. *Aloys Heinen, M. D., Chicago*	144
The Much Neglected Veru Montanum. *F. Kreitzl, M. D., Chicago*	147
The Relation of Syphilis to Cardiovascular Disease. *James G. Carr, M. D., Chicago*	149
Special Disorders of the Heart from Goiter. *E. P. Sloan, M. D., Bloomington, Ill.*	152
Oblique Inguinal Hernia. *A. M. Harvey, M. D., Chicago*	154
Iridotasis in Simple or Chronic Glaucoma. *[illegible] Allport, M. D., Chicago*	155
Radiograms of the Injected Arterial System. *J. H. Carpenter, M. D., Chicago*	156

(Continued on page 36)

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The Boston Number

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CONTRIBUTIONS BY DRS. ARL[illegible] D. LEONARD and FREDERIC[illegible]
Roentgen diagnosis of [illegible] dominal quadrant

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Early diagnosis of pulmona[illegible]berculosis

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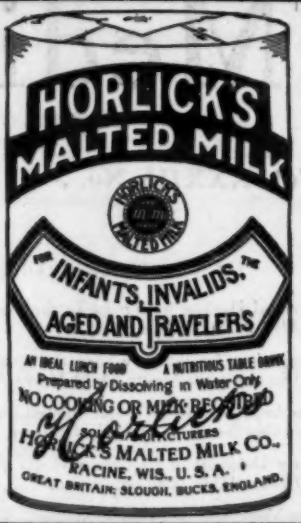
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ILLINOIS MEDICAL JOURNAL

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Original Articles

PERSONAL HYGIENE FOR TROOPS IN THE FIELD.*

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CHICAGO

The subject of personal hygiene is one with which every physician is more or less familiar. However, when consulting texts, preparatory to instruction of officers and men of the army, the medical officer will be confronted by a mass of details and the failure to emphasize the important facts in this subject.

The subject matter of the following outline of personal hygiene is condensed. It contains only such facts as have been found necessary in the education of troops with which I have been associated during the past years. The teaching of this subject to the men of the organization to which the medical officer is assigned is part of his duties as laid down in the Manual of the Medical Department.

To the medical officer taking military service for the first time, many of the facts of personal hygiene may seem obvious. He will learn, however, in a very few days, that what to him is axiomatic is to the officers and men of his organization an entirely new subject.

1. *Air.* Fresh air and plenty of it is a primary essential for good health. Considering its cheapness and prevalence, it is one of the commonest factors in personal hygiene that is neglected. Whether working in an office or in barracks or even sleeping in a tent in the field, sufficient fresh air should be admitted to allow frequent change. In order to get the fullest benefit of outdoor air one should practice deep breathing. In the Sibley tent the top hood should always be open at night, and the door should be partially open to allow circulation. In the wall tent the door should never be tightly closed, except in the most inclement weather.

Cold air is no more beneficial than hot air, and cold air does not mean greater purity. Hot, fresh air does not stimulate as much as cold air, but its value from the standpoint of health is just as great. It is through deficient ventilation that such diseases as common colds, tonsillitis, bronchitis, pneumonia, and many of the acute infectious diseases are transmitted from one person to another.

2. *Light.* (a) *Natural.* Sunlight is the most efficient and least expensive of all germicides. Virtually every microorganism is killed by exposure to direct sunlight for thirty minutes. Sunlight is, therefore, essential in dwellings, because germs which otherwise would multiply are killed by it. Window shades should never be tightly closed during the entire day to keep out sunlight. Houses should be built where there is some shade, but not so much that the sunlight is entirely excluded.

The effect of sunlight on the human system is beneficial when the exposure is not too prolonged and not too intense. Every individual realizes how much better he feels and how much more fit he is for usual occupation on a bright day than on a dull one. Prolonged sunlight, however, is harmful when combined with intense heat which accompanies it in the summer months.

Intense sunlight, either direct or reflected from snow or ice, is very harmful to the eyes, and may produce a temporary blindness. It should be guarded against by the wearing of amber glasses. Direct sunlight on exposed surfaces of the body, such as arms, face, neck and chest, will produce a burn just as intense as a burn from scalding water. It will produce the same and as serious systemic effects, namely, prostration, fever and

*Compiled from a series of lectures delivered to officers and men of 1st Ill. Cav., 2nd Reserve Militia and Cook Co. Ambulance Co.

nephritis. In the field the sleeves should be kept rolled down, and the hat on in order to protect the face and arms from this burning.

(b) *Artificial.* When working with artificial light it is desirable that the light be sufficiently intense to allow easy reading of fine print. It should be so placed that it does not shine directly in the eyes, and should not be of such intensity as to dazzle.

3. *Clothing.* The clothing worn in summer should be light cotton, and while in civilian life athletic underwear is desirable, it is not so in marching. Underwear is essential to the soldier because the dust and sand work into his outer clothing, and unless his legs are well protected, chafing results, and he is unable to resume the march. This is particularly true of mounted soldiers, but is likewise important in infantry work. The number of layers of clothing worn are of great importance for the retention or dissemination of heat. During the summer fewer layers of clothing should be worn, as the insulation due to the air spaces between the various layers is the factor of great importance in the retention of heat. The fewer the air spaces the more rapidly will the surfaces of the body be cooled, and the more comfortable will the man be. During the winter, in active outdoor campaigns, heavy clothing should be worn and wool or heavy cotton underwear is desirable, but it is the number of layers of clothing rather than the increase in the weight of the individual garment which is the factor of greatest importance. It is far better to wear a sweater and heavy overcoat, both of which may be removed when entering a warm office or barracks, than it is to wear two suits of heavy underwear which may not be removed until night.

Day clothing and night clothing should always be different. In the field, in tents, or in barracks, where heating facilities may be deficient, it is not infrequently necessary to sleep in as much clothing as one wears during the day. Under these circumstances the underwear and socks worn during the day should be changed to another set. No shoes or puttees should ever be worn at night except when a man is on duty.

Where possible at night, underwear and clothing should be removed, and the soldier should sleep in pajamas. In winter the man should be attired in flannelette pajamas, with the addition of socks and a woolen helmet, if necessary. In sleeping there should be sufficient blankets to keep one warm. An important essential, however, is the arrangement of the bed clothing by tucking in around the body rather than tucking in around the mattress or tick. It is very important to have sufficient covering under one when sleeping on a cot, because otherwise the cold penetrates the canvas, and no matter how much top covering one has, sleep is poor because of cold.

The wearing of the clothing of another individual, unless clean from the laundry, is very undesirable, as this habit is frequently responsible for the transmission of lice and skin infections.

4. *Hat.* The army hat, when worn according to regulations, is a fairly satisfactory hat for the protection against sun-stroke. It has a large area of air space between its peak and the scalp, and is made of ray-impermeable material. It was designed with this idea in mind, and it should be worn constantly on the march and in camp as well.

The sweat band should be frequently washed with soap and water to prevent inflammation of the skin of the forehead.

5. *Shoes.* No man should start on a campaign of any type without at least two pairs of good shoes broken in for marching. The shoes should be roomy but not of the type that slips up and down on the foot. Many a man has been cured of corns by the wearing of the regulation army shoe which is wider across the toe than that worn in civil life. The soles must be perfect, and the tongue fit smoothly. Eyelets are preferable to lacing hooks.

6. *Feet.* Daily bathing of the feet is essential. Without this daily cleansing they chafe rapidly, blister frequently, and disable the soldier. After bathing carefully, the nails should be cut straight across and all corns trimmed down closely. It is desirable on the march to use talcum or any one of the foot powders on the market. The medical department of the army supplies a very good one.

7. *Socks.* Two types of socks, woolen and cotton, are issued in the army. The woolen socks are of the type called cashmere, and are moderately heavy gray socks without sole seams. The sizes run large as they should, and the socks shrink on washing unless this is carefully done. A woolen sock is the most desirable for men in the field, both

winter and summer, as it protects the feet against chafing from shoes, and in cold weather is warmer than the ordinary cotton sock of civil life. They should always be roomy, for a short sock will do as much harm to a foot as a short shoe. They should never be worn with holes because of the friction on the toes. Every man should be provided with at least six pairs on taking the field.

8. *Bathing.* Bathing in the field is even more essential for good health than in civil life. The soldier, as has been mentioned before, must make every effort to bathe his feet at least once daily, and the same rule applies to the axilla and genital region. Where possible, a full bath must be taken daily, but where this is impossible, sufficient water is, as a rule, at hand to bathe the regions mentioned. The full bath is essential to remove dirt, grease and the results of perspiration, and to keep the glands of the skin functionating properly. The regional bathing is essential to prevent chafing. By frequent bathing that great scourge of armies, lice, is largely prevented. Lice may be absolutely prevented by a daily bath and change of underwear.

When the bathing is done by swimming in streams or ponds, great care must be taken not to take any of the water into the mouth, because this water is always contaminated with germs, producing intestinal difficulty of one type or another.

Hands. It is essential that the hands be washed before eating, and that the nails be kept properly cleaned. The duties of a soldier are such that it is necessary for him to handle many articles that are infectious, and unless his hands and nails are well cleaned before mess, he will contaminate all the food that he eats, and through this contamination, produce many serious diseases.

9. *Hair and Beard.* For two reasons, neatness of appearance and prevention of headlice, the hair should be kept closely trimmed. For the same reasons the man should be smooth shaven. Nothing so detracts from the appearance of a soldier as a three or four-day growth of beard.

10. *Teeth.* In his personal equipment every man should carry a tooth brush and tooth paste. Brushing should be done after meals with an up-and-down motion rather than with the lateral motion so frequently used. All large particles of food should be removed from the interstices with a soft tooth pick or dental floss. The teeth should be kept in repair, for it is through decayed teeth and abscessed roots that many diseases, such as rheumatism and septic infections, enter the body.

11. *Expectoration.* The expectoration of mucus in public places is undesirable both from an esthetic and health standpoint. In spitting or sneezing in the presence of other individuals, except on an open sun-swept field, one transmits influenza, colds, tuberculosis and other diseases.

12. *Food and Water. Food.* In private life, the individual chooses his food largely according to the whims of his palate. He, as a rule, chooses a mixed diet, but in most instances it is not well-balanced. It should consist of a large amount of fruits and vegetables with a lesser amount of starches in the form of bread, pastry, cereals and the addition of sugar and a still smaller amount of fats. To this diet, meat should be added in an amount lying somewhere between the fats and starches. In the army the food is supplied as such, as it is under the supervision of company officers and mess sergeants. The diet here should be mixed in the same manner as described above. Every effort should be made to supply as large amounts of fruits and vegetables as is possible, for their absence leads to several serious diseases such as scurvy and beriberi, and that most common ailment constipation and its attendant ills. All fruit and vegetables should preferably be cooked except that type of fruit which can be pared before eating.

Food, to be palatable, must be properly cooked, must present variety, and must be properly seasoned. Nothing produces more unhappiness than improperly prepared food, and an army to be efficient must be happy. In the army the character of the food furnished to the companies is far better than the average obtained in the better class of restaurants or homes. Its preparation, however, is rendered difficult to green men by the use of strange cooking utensils. With proper training, however, the very best mess can be made from the Government allowance of food without the addition of a cent for extras by individuals. dividuals.

Water. A pure water supply is essential for the health of communities and individuals. Through impure water, typhoid, cholera and allied diseases are transmitted. In civil life the water

supply is usually guarded at the source, and only water of a known purity is used. In the field, however, the situation is an entirely different one, and it is not uncommon to have the drinking water polluted. Such water should never be used without first boiling it or subjecting it to some chemical means of purification. In the army, the Lister Bag, holding a measured amount of water, to which chlorine is added, is issued for field use.

Every soldier is provided with a canteen, which should be filled on the morning of the march. This canteen of water, regardless of the temperature, should last the soldier until the next camp is made when fresh water of known purity is supplied. An old soldier drinks very little water on a march during the hottest day, and during cold weather almost none. He knows from experience that he will march better and have less intestinal difficulty if he does not drink while marching. Rinsing the mouth out with a small amount of water is desirable, but the swallowing of copious draughts produces cramps.

Weak tea and coffee served with meals is a proper manner of putting fluid into the body, during an active campaign or march. This water has been boiled in the process of making the beverage, and consequently contains no disease germs. Water from wells driven eighty or more feet and piped to the surface is always safe. Running water or water from ponds or lakes is usually contaminated by drainage from the surrounding territory, and the drinking of such water will produce intestinal difficulty as well as typhoid and allied diseases. The same is true of the dug well of a farm.

Ice. Ice made from water of a polluted stream contains nearly as many disease germs as does the water itself. If it has aged for three or four months the germs die out to a limited extent, but such ice should never be used directly in drinking water or other beverages, nor should any food ever lie directly on it. When desirable to ice beverages, the proper method is to use a barrel or other receptacle filled with ice into which is set a milk can containing the beverage.

13. *Exercise.* Exercise is essential for the development of the heart and other muscles. While many individuals are endowed at birth with normal muscles and heart, lack of use interferes with their proper development and function. Daily, systematic exercise should be taken by every individual who desires to become an efficient soldier. Those laid down in the drill regulations as "setting up exercises" are desirable. They are so arranged that all muscles of the body are brought into play, but special stress is laid upon the development of the arms and chest, for these are the groups commonly neglected.

Irregularity in exercise is to be condemned. No individual has a right to work his heart or any set of muscles to the maximum once a week. He should, instead, so gradually increase his heart and muscle competency by daily exercise that, in the event of what is to the ordinary individual extraordinary strain, his system will rise to the peak load.

Rest. After exercise, rest is essential for the removal of the waste materials generated in the use of energy. It is, therefore, essential that the conditions for sound sleep be present. These conditions are sufficient fresh air, sufficiently warm clothing and shelter from wind and rain. The average individual needs eight hours sleep daily, and, when possible, one's life should be so planned that the necessary hours be allotted for that purpose.

14. *Cots and Ticks.* Where possible a man should never sleep on the ground. In most active campaigns flooring is supplied and in a majority of semi-permanent barracks cots are used. Either with or without cots, ticks, to be filled with straw, are issued. It is essential that this straw be carefully scrutinized for the presence of vermin, and that it be frequently burned and replaced with fresh. Where ticks alone are furnished, they should not be placed directly upon the ground, but be separated from it by boards, boughs, or, if necessary, the poncho or raino, issued by the quartermaster.

In a mosquito country, the mosquito bar must always be tucked in at night around the cots. The bar issued by the War Department covers the entire cot and its use prevents malaria, dengue and yellow fever.

15. *Alcohol.* The use of alcohol in any form during summer tours of duty tends towards the production of heat exhaustion. The ordinary individual should do without stimulant of any kind except in a great emergency, when it will be issued by or under the supervision of the medical department. Alcohol is commonly issued in the trenches where excessive strain without food for

relatively short periods of time necessitates the addition of such stimulant.

16. *Tobacco.* The use of tobacco for smoking is not considered harmful to the majority of individuals. To some individuals, however, it acts as a distinct poison, and these men should never, under any circumstances, acquire the habit. Chewing tobacco and the taking of snuff have a deleterious effect upon the appetite and digestion, and, therefore, should not be used.

17. *Individualization of Canteens, etc.,* Drinking from another man's canteen or cup occupies the same position in regard to health as the borrowing of a tooth brush. The possibility of acquiring an infectious disease, such as tonsillitis, diphtheria, tuberculosis, or syphilis, through such habit, is a known fact, proven by many instances. The same danger lurks in the interchange of unwashed cups or eating utensils.

Lead pencils used by others should never be put in the mouth. Epidemics of diphtheria have occurred in this way.

Pipes should never be borrowed. Numerous cases of syphilis have been transmitted by this habit.

18. *Sexual Hygiene.* Sexual indulgence through indiscriminate intercourse is harmful. Continence and self-control in the male is valuable, firstly, from a moral standpoint, and secondly, from a standpoint of physical health. The moral strength acquired by self-abnegation in the field of sexual indulgence is greater than in any other. Intercourse is not necessary for the health of the individual. The nightly emissions, which occur in the normal healthy male, from time to time, represent nature's method of caring for an excess of secretion. The man who works and plays in a normal manner, who sleeps and eats as the healthy individual should, who has his mind constantly occupied with affairs of consequences to his present and future, has little or no abnormal sexual appetite. One should abstain from the detailing of erotic stories, from the company of lewd men and lascivious women.

From the standpoint of physical health, two of the greatest plagues to which humanity is heir are transmitted through illegitimate sexual intercourse. Syphilis and gonorrhea in their immediate and after effects produce more physical debility and death than almost any other diseases known.

The vicious habit of self-abuse, common as it is amongst boys of immature age, is distinctly significant of a mental and nervous degeneracy in individuals of adult age. Every self-respecting individual must have sufficient self-control when he reaches an age of reasoning ability to break away from a habit with which he himself is disgusted. Its effect upon the nervous system and upon one's ability to concentrate and do conscientious work is known to be very deleterious.

Care of the prepuce. One of the factors in the production of excessive sexual desire is constant irritation of the penis through retained prepucial secretion. This secretion should be removed by daily washing; if this excessive skin cannot be drawn back easily, the irritation should be prevented by the very slight operation of circumcision.

19. *Feces and Urine. Feces.* The average individual needs an evacuation of the lower bowel at least once daily. This removes the remnants of food and the bacteria which make up about fifty per cent. of the normal bowel movement. The retention of this mass of noxious substance is a factor in lowering the resistance so that under summer conditions heat exhaustion is favored. The absorption of certain poisons formed by the action of bacteria upon food stuffs produces headaches, loss of appetite and a feeling of general malaise. The lowering of resistance resulting makes the individual more susceptible to all the ordinary infectious diseases such as colds, tonsillitis, influenza, etc.

Under the ordinary environment of civil life, the individual should so select his diet to include sufficient fruits, coarse breads and coarse vegetables. If this is done, normal bowel movements without the use of medical cathartics is the rule.

In the field, however, the situation is a somewhat different one. The food issued is usually in a concentrated form without the addition of the cellulose and laxatives of fruits and coarser vegetables. Furthermore, strange toilet facilities and the nervous strain of a change from a known to an unknown occupation has a tendency to restrict the desire to go to stool. When first taking the field this must be counter-balanced, when necessary, by the use of mild medicinal cathartics, and every soldier should exercise constant watchfulness and report to the medical department if he goes a single day without a bowel evacuation.

On the march on an open road usually no toilet facilities are offered, and the man must go into the woods or cornfield along side to relieve himself. As part of his personal equipment, the soldier should always carry a supply of toilet paper. There is a regular issue of toilet paper by the army, but this, of course, is never at hand on the march. Its presence in a convenient pocket of a man's blouse is frequently a source of great satisfaction.

In a well organized company, a squad is detailed to build a straddle trench immediately upon occupation of a camp site. This trench, to accommodate one hundred men, is eight feet long, three feet deep, and its width that of a spade. The earth is thrown to one side, and after being used by a man, his deposit is covered by kicking some of this loose earth into the trench. The trenches are located on the flank opposite the mess tents, one to each company.

The fouling of a camp site is a very grave hygienic offense, both from the standpoint of the command occupying it, and from the fact that other commands may have to follow and use the same location for a camp.

Urine. The same general rules regarding the use of the latrine for defecation applies to urination. Under no circumstances when in camp during the day, does a man urinate except at the designated point. During the night it is the habit to place a can or two holding several gallons in each company street, and to have a red lantern burn by its side. Into these cans the men urinate at night. They are removed at reveille and the contents emptied into the latrine. The point at which they stood is sprinkled with crude oil or lime, and the cans having been emptied into the latrines are burned out, after which a small amount of crude oil is left in them.

Conclusion.

The teaching of personal hygiene to the officers and men in the field may be handled under the following headings:

1. Air.
2. Light.
3. Clothing.
4. Hat.
5. Shoes.
6. Feet.
7. Socks.
8. Bathing.
9. Hair and Beard.
10. Teeth.
11. Expectoration.
12. Food and Water.
13. Exercise.
14. Cots and Ticks.
15. Alcohol.
16. Tobacco.
17. Individualization of Canteens, etc.
18. Sexual Hygiene.
19. Feces and Urine.

104 S. Michigan avenue.

SUGGESTIONS FOR THE PREVENTION AND CONTROL OF VENEREAL DISEASES IN THE ARMY.*

A. E. Mowry, M. D.

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CHICAGO.

The story of a soldier's life during real war is one of changed destiny. Some men previously considered great become insignificant, others that have never been heard of, famous. A soldier's life might be divided into about five epochs and each period produces changed problems that must be met.

Period 1. Enlistment to time of departure to training camps.

Period 2. The first part of the time spent in training camps.

Period 3. The latter part of the time spent in training camps.

Period 4. Active service at or near the battle fields.

Period 5. Begins when peace negotiations are started and ends when the men are finally mustered out of service.

The dangerous time so far as venereal disease and venery are concerned, as I will show later, are periods three and five.

I believe that there is more venereal disease in our great army at the present time than figures disclose for many men are suffering more or less from venereal disease, but as this is the only sickness that is penalized, they only report their cases when urgent symptoms make it necessary or are accidentally found out. The above will apply at least to some cases.

* Read at the Englewood branch of the Chicago Medical Society Tuesday, Feb. 5, 1918.

In time of peace most departments that have to do with war feel that their readiness and methods to cope with actual war problems and conditions are practically finished products and ready to meet the varied and diverse problems, such as are encountered when the call comes for mobilization for actual warfare. This feeling of security is general among nations and the departments that have to carry on the specific duties looking to the successful and proper execution and management of the war game. All nations in this great world war have had rude awakenings and shocks and many of their original war methods and plans have been shattered or altered, due to many reasons and causes. The medical departments are not to be excepted in the above general statement, for they too have changed ideas, ideals and plans to meet actual warfare, and are still uncertain in regard to some phases of their new and unforeseen problems that have suddenly appeared, and must be handled as best they can be.

When I enlisted in 1898 in the hospital corps of the First Illinois Volunteer Cavalry, and reached Springfield, I was fully imbued with the idea that all problems, present and future, had been carefully considered and covered. Doctor Senn had brought the surgical department of the Illinois National Guard up to a high standard of war efficiency. Our new field medicine chest, with all its new advantages and completeness, made me feel sorry for the poor soldiers that had been unfortunate enough to be in the hospitals during the Civil war, but I might guess now that the Civil war surgeons set out with all the assurance that we did in 1898.

We had handled our little epidemics of meningitis and other contagious diseases in a manner that gave us more than reassurance that we were prepared for any and all conditions that might arise. But when we were sent south and the soldiers encountered long and hard marches, partly undesirable and too much the same foods, burning hot sun and drenching rains, causing a lowered vitality in most of the troopers, we saw problems arising that we had not figured on. Typhoid and other maladies found us not fully prepared and we saw many things afterwards that we had not learned before hand. Our observations and experiences, good and bad, helped to change things for the better, that are today protecting the lives of our soldiers.

The medical department of the United States Army is efficient, and I hope that every epidemic is not the cause of some advisory or investigation committee being created over night, for these things cause confusion and hasty changes that are not always for the best.

Venereal diseases have played havoc with armies from time immemorial. They have caused untold damage to the real fighting strength of nations in conflict, and it might be guessed that wars have been won or lost as a result of seriously handicapping the man power by their divitalizing and crippling effects. In the matter of venereal diseases we must make careful surveys, taking many salient facts into consideration in making conclusions and formulating lines of action that will be effective. Man is largely a sensual being—the control of his sexual instincts, desires and determinations must be made a matter of close and careful study.

A body of men are called on for military duty; they are sent to camps and are relieved of their ordinary home ties, such as wives, relatives and possibly sweethearts; they feel a peculiar desire to do things that they ordinarily do not do. It is with this class of healthy males that the commanding officers and surgeons have to try and devise ways and means to limit sexual activities. It is no easy problem to satisfactorily settle and at the same time satisfy every one.

When we carefully plan and attempt to execute a method that promises to largely prevent or greatly reduce indiscretions, we find that we are stepping on somebody's toes, and a protest is heard that sometimes refuses to subside. This protest may be from the officers themselves.

Regarding the examining boards that say whether a man is fit for military service or not—they have worked faithfully, honestly and hard, but in many cases they have made errors, for they must decide maladies in some cases that specialists should pass on and the surgeon-general has now ordered advisory boards for that purpose, which is a good move in the right direction. If I were on an examining board I would quite likely overlook a case of dementia præcox, for I would in all human probability fail to recognize it and so it might be that the other man would not be sure of a diseased seminal vesicle which I would probably recognize. Too much care cannot be taken in passing on a man's fitness for the service, for a man with latent focal infection makes a bad advertisement for the gen-

eral welfare and health conditions of the army. Many a soldier with deep-seated latent infection becomes a menace, because long marches and other strenuous work, such as is required of soldiers, causes a lowered vitality and resistance, and the man becomes an easy prey for deadly diseases and epidemics.

Latent venereal diseases are no exception to the above statement and they do untold damage by acute exacerbations due to divers causes and tend to spread by indirect methods. A man should be examined carefully for latent venereal diseases. Many men who are anxious to enlist will attempt to fool examiners unless they are on the alert. They will not urinate for several hours so as to be sure to have plenty of urine to wash all pus and shreds out of the urethra and wind up with a nice, clean glass to present to the examiner. That is along the lines employed by a man who is near-sighted and asked what eye chart was used. He said he had learned the letters so he could say them forward and backward. There are tricks to all trades.

Army life goes in cycles so to speak. The first cycle is that period of exciting expectancy when the first good-byes are said. Soldiers may or may not indulge mentally or physically in matters sensual at this time. Many girls will be injudicious, making or taking undesirable conditions. This period is of short duration and rather hard to cope with.

The men are sent to camps. Here is where the future welfare of the army gets a good start in the right direction. The men drill, and if in good physical and mental condition, enjoy the work. The army food, while plain, is good and fully enjoyed. Men work hard to become proficient and secure promotions and recognition. There are no girls or women to tempt them and their hard work and lack of sexual stimulus makes their ordinary sexual desires and thoughts appear diminished and it is at this stage that surgeons are constantly asked to quietly tell just how and where the saltpetre is being sifted in the food and drink. They never inquire as to whether it is really being done, but their feelings are such that they know it must be, but they can't tell whether it is in the coffee, salt or bread, and their curiosity impels them to seek information. This particular stage is a good place to lay good plans for the future welfare of the men for the next turn of usual events will come unless safeguards are erected and prove effectual.

Many officers desire to have their wives and sweethearts see just how well they look and act at the head of a regiment, company or squad. The girls need but little coaxing to come, and in many cases they gently take the initiative and suggest a visit. The troopers have been doing fine in all ways. Presently there comes a number of attractive young women to see the novel attractions found in and about the camps. Skirts will be lifted as the fair ladies walk down troop streets so that they will not trip on ropes or gather dust. The troopers discover that the saltpetre has not entirely robbed them of sensual desires and they become anxious to seek ladies of their own in one way or another. I remember while at Chicamauga a matron of a southern seminary for young ladies brought them to visit our camp. The sexual stimulus that these girls set in motion could not have been subdued if we had had a carload of saltpetre. The men began to demand furloughs so they could visit houses of prostitution and others began to have nocturnal and diurnal emissions that did not help the health of the camp. I remember that one trooper became wildly delirious and the guardhouse would hardly hold him. Many women visitors loudly condemned the camp because of inadequate toilet facilities that were available for ladies. I hear the same cry at Rockford now. The experienced older army officers judiciously discourage women visitors as far as possible.

When I read in the paper some years ago that certain well meaning, but short-sighted bodies were having pretty actresses go to Joliet to entertain the prisoners, I thought of my army experiences along that line and felt that it was a dangerous experiment. I read soon after of the murder of the warden's wife. Sexual instincts are dangerous things to trifle with and the present suggestion of the army officers that all women visitors go to a Y. M. C. A. tent and meet the soldiers there in a decorous manner, should be commended. The rule should be religiously carried out and no exceptions made, for exceptions will cause dissatisfaction and disorder.

To keep the morale of the men at a good standard requires tact, good judgment and severe penalties.

Tact and good judgment are always good things

and if these can succeed they are of the greatest value. Many army officers have the very necessary faculty of being able to impress men of the dangers of doing certain things they should not do, and in this way keep their companies in good trim.

I have just received a letter from a young soldier whom I know who is in training at Camp Dodge, Iowa. He says, "We had a heart-to-heart talk from our new captain today. He gave us a good lecture on the lady subject, and told us that in his brother's company, now in France, thirty-five men killed themselves on account of diseases like syphilis, and he told us for God's sake keep away from them, and believe me, Doctor, I know a little about that and I sure will keep away from these diseases."

That captain will do much good in his way. He creates fear of venereal diseases, and my own belief is that honest fear is the best method to keep men in line. If they could have movies showing a man undergoing the agonizing torture and pain of locomotor ataxia, and a blind asylum's grewsome quota of syphilitics and a hospital ward full of helpless and partly incurable gonorrheal arthritis as well as a medical dispensary's usual display of phagedenic chancres and were told on another chart that fifty per cent. of women triflers were diseased and no surgeon could tell truly that they were not diseased, I think many soldiers would make a quiet little resolve to be extremely careful.

As to severe punishment to men who disobey, there might sooner or later be a strong and injurious resentment, or men would not report disease for fear of penalties and in this way become seriously sick by neglect or improper treatment. However, as things stand today, it seems that this measure is justifiable and necessary and serving a good purpose.

In the period where the men become overanxious to indulge in sexual orgies, they oftimes lose good judgment and forget almost everything excepting their sexual appetite. I have seen men get in touch with a girl in some manner or another and as many as fifteen or twenty slip out a side line at camp, one at a time, and indulge in a dangerous seance. On one occasion there was a girl, evidentally mentally defective, who had been mistreated by a number of soldiers almost the entire night, and at four a. m. she was in a comatose condition. This circumstance did not occur in my own regiment, but in a regiment that was camped next to us. Such occurrences as these have put army surgeons and officers on their guard and much better conditions may be expected during this war.

In this free country radical moves have to be made carefully and with the moral backing of a majority of the people. It will be a great day when a rule can be made and backed up that will exclude all women from the soldiers in camp, excepting properly dressed graduate nurses, sisters of mercy, or mothers, sisters or wives of men dangerously sick in hospitals.

The next stage in army life, namely, the firing line, needs but little protective efforts to keep the women at a distance, but even here we hear of occasional unlooked-for circumstances that seem incredible. So the eagle eye must still be working, expecting occasionally to detect a girl dressed as a boy, or hiding in one of the empty cannons. The army life is almost as alluring to women as men, and sometimes women do not recognize the word—Fear.

The last stage of army life during war is, in my opinion, the most gravely dangerous period so far as discipline and morals are concerned. No more fighting—organized bodies of soldiers who have trained hard, learning that they are not going to see a battle front, become peculiarly restless and indifferent. No more chance to become generals or heroes; they lose their military poise and change tactics. They sometimes forget their previous good resolves and seek undesirable chances. If they should be in France they might feel that they would never quite be satisfied afterwards if they did not take one little flier into the world-famed sensual supreme zones that are listed there. If in other localities they might anticipate a little visit to the often described beautiful creoles, etc. Other undesirable pastimes might be thought of. I only hope the army officers can cope with this stage as well as they have apparently done in stages now at hand. To prevent breaks of discipline in the last stage requires much genius. It is in this stage that officers who have been unpopular have all manner of abuse to contend with. They are sometimes assaulted or cannon wheels sent through their tents. Privates supposed to be shirkers are not to be envied. I have seen the above described conditions. But some way we feel that this war

is going to be handled so carefully that many undesirable things seen in other wars will be sidestepped.

I have given the army life as I have seen it. I am probably mistaken in some of my observations and conclusions, but in a main way I have tried to give suggestions for thought in the matter of curtailing venery and venereal diseases.

My firm belief is that fear should be strongly implanted in the soldier's minds, for fear will control venery when moral suasion or conscience fail to conquer.

Regarding the curing or aborting or preventing of venereal diseases I can't agree in some of the methods and suggestions that the advisory board have formulated and put in book form.

Venereal diseases are hard to cure or abort at best, and I do not feel that a little discussion on these important subjects will be misinterpreted. It is easy and sometimes cowardly to criticise, but in the matter of venereal diseases it is a debatable subject and one that is far from satisfactorily settled by any one.

Most suggestions brought forth by the board are applicable and satisfactory. Others might be honestly questioned. In the matter of prevention of venereal disease there is no prophylactic agent like the copious use of soapsuds and a soft lather at that. I think the board should have gone into a little more detail regarding this important maneuver, for nine men out of ten just told to use soapsuds will do it superficially or carelessly. I think army surgeons should get a cake of the right kind of soap and show the men how to get a copious and effective soapsuds that will remove tenacious mucus such as is deposited on the different parts of the penis after intercourse with a woman who has venereal disease, for it is this tenacious mucus that the spirochetes or gonococci are strongly intrenched and will adhere, notwithstanding applications of various germicides, and the only method of annihilating the mucus and its hosts is to remove it carefully and effectively by washing and rewashing with a good soft lather and rinsing off with water. Then antiseptics can be applied. I personally prefer ether, for it is active and penetrating and burns but a minute. Do we think how seldom a barber transmits disease with his razor? I am convinced that the soapsuds he employs kills the disease germs with no uncertain accuracy. Many patients coming to my office when told to wash the penis carefully will do a sort of a half-hearted two-finger sortie with the soap and accomplish little or nothing. I take the cake of Grandpa's tar soap and with running water and both hands produce a lather that means effective cleanliness and sterilization. I always instruct the patient to rinse off all the soapsuds and if he has a foreskin to be sure and pull it down in place with a quick move.

Another point. In the treating of so-called chancroids, the advisory board in certain cases suggests cauterization. I find the less I cauterize the better results I obtain. Soapsuds and ether again seem to be serviceable along with an intravenous injection of diarsonal, in advancing or persistent cases.

In the treatment of syphilis the board recommends intramuscular injections of salicylate of mercury as probably the best mercurial preparation to use.

I can't possibly understand why insoluble mercurials be advised rather than soluble preparations such as bichloride or benzoate in large doses. The United States army surgeons themselves, after careful and persistent treatment of a large number of cases of syphilis in all stages, and after a long course of treatment, came to the conclusion that their results were very unsatisfactory, and if I remember only a very few cases in a large number treated were cured.

These tests were made at Fort Leavenworth by most competent men and these results should be considered when it comes to such an important matter as curing syphilis.

The salicylate of mercury injected into the gluteal muscles is very slowly absorbed and the average time of complete absorption is fifty days. The spirochetes by this slow absorption often become so-called mercury-fast and do not decrease in numbers as we might expect. They may even increase in numbers and resisting qualities. Another factor is that the slow absorption may cause focal disturbances of the kidney or gastro-intestinal tract, thus producing a lowered vitality and all sorts of undesirable conditions.

Sodium-cacodylate is another undesirable and unsatisfactory specific treatment that should be discarded.

It will not cure syphilis or at least only a small percentage of cases.

We are doing our syphilitic patients an injustice unless we seek to quickly and forever eradicate the terrible disease from his body. I candidly believe that soluble mercury is the only method that will, in a large majority of cases, give us a permanent cure. The French army are very largely employing large intramuscular doses of benzoate of mercury and their results have been most rapid and effective. In a recent issue of the *Journal A. M. A.* Bory reports successful and rapid treatment of twelve hundred cases of syphilis in his service in a French hospital by use of benzoate of mercury in large doses.

Soluble mercury injected in the gluteal muscles is entirely absorbed and completely eliminated in forty-eight hours and our next dose can be administered at that time without getting the peculiarly toxic accumulative effects observed in the repeated injections of insoluble salts of mercury.

The more I treat syphilis with benzoate of mercury the less I value any other therapy not excepting salvarsan and its good substitutes. They will clear up a mucous patch or skin eruption but I have lost faith their being able to eradicate the spirillum pallidum in a permanent manner. The comparative and extensive work done by Lloyd Thompson of Hot Springs, should be convincing of the important value of benzoate of mercury. In my own experience not one case in thirty of early syphilis treated constantly and persistently for fifteen weeks has shown a recurrence after one, two or three years without further specific treatment.

I have secured apparently permanent cures in many cases where salicylate of mercury, grey oil and calomel injections have been energetically used over considerable periods of time without checking the disease except for short periods of time.

My small contentions, or rather suggestions are not intended for the medical department of the United States Army for it has made almost unbelievably rapid strides in efficiency in the past few years.

My suggestions are based on reports made by the Board of Civilian Genito-Urinary Surgeons appointed for that purpose.

THE IMPORTANCE OF EARLY AND EFFICIENT DOSES OF ANTITOXIN IN DIPHTHERIA.

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Von Behring's diphtheria antitoxin was first used on patients in von Bergmann's clinic in 1891, more than a quarter of a century ago, though not until Roux addressed the Eighth International Congress of Hygiene and Demography at Budapest in September of 1893, did its use become general. At that time Roux described in the most exact manner every detail of its production and use and thus placed its value upon a firm foundation. In this remarkable paper he reported 300 cases and showed by analysis of various statistics the great worth of the serum.

That during this time antitoxin has amply proved its value in diphtheria is not open to discussion. Analysis of the combined mortality figures of preserum times as compared with those since 1894 plainly indicate its merit, there having been a reduction from approximately 50 per cent. to 15 per cent. or even lower. In diphtheria antitoxin we possess the one indubitably successful curative serum, the effect of which is settled beyond question.

Despite the fact that we have had at our command for so many years a remedy of such direct specific action, it seems odd that the death rate for diphtheria should be greater than would result from errors in diagnosis and from other inevitable incidents. That the number dying from the disease is still unnecessarily great, a cursory examination of recent mortality rates will show. In Chicago for the years 1915-16-17 the death rate was 11 per cent. of the reported cases, while in the eight principal cities of the United States it ranged per 100,000 of population from 10.52 in Baltimore to 31.51 in Chicago. Though antitoxin has saved probably 250,000 lives annually, yet diphtheria still causes more deaths than whooping cough, measles or scarlet fever, the average number of fatal cases being 17,000 annually. Thus we have every justification for believing that the toll demanded by this disease is still needlessly high.

Allowing for the unavoidable errors which will always occur, it must be possible to reduce the

death rate to a figure very much lower than the present level. From the evidence at hand, one concludes that this is to be accomplished through two principal channels: education of the public and education of the medical attendants to better methods of diagnosis and to a more advantageous application of the specific which we possess. That there is need of such education we shall presently endeavor to show.

Our knowledge of the mode of production and the action of diphtheria toxin and its neutralization by antitoxin is fairly definite. The toxin is elaborated by organisms in the membrane, chiefly, and absorbed into the circulating blood at the point of infection. Through the blood stream it reaches those cells for which it has an especial affinity and remains, probably for a short time only, in loose combination with them, dissociation presumably being impossible after the lapse of two or three days. The first action of antitoxin is to unite with the toxin being absorbed at the point of production and with that still free in the blood stream. The greater the amount of antitoxin present the more rapidly will the latter occur. Aided by greater concentration the antitoxin finds its way into the tissue fluids where it attacks the combined toxin, but in order to separate the latter from the cell, it is probably necessary for the antitoxin also to attach itself to the cell, and that this may occur, the concentration in the blood, as Berghaus has shown, must be great. Once the union between toxin and tissue is fixed, the presence of antitoxin is powerless to dissociate them and consequently treatment is of no avail. From this it is seen that the effective time of antitoxin action is limited to a few days, that the rapidity and efficiency of its action is in direct proportion to its concentration, and that it is important to give enough antitoxin before a fatal dose of toxin shall be absorbed.

Having shown from a theoretical standpoint the urgency of administering antitoxin at the earliest possible moment, the importance of timely diagnosis is easily to be seen. In analyzing a series of fatal cases, next to the delay in calling a physician, one was impressed by the slowness with which a diagnosis was made. Few conditions admit of so little delay in recognition as does diphtheria, and when a physician accepts the care of a real or suspected case of this disease, it becomes his solemn duty to leave no act undone which could aid in determining a diagnosis at the earliest possible moment and in obtaining for the patient the benefits of antitoxin, despite monetary considerations or the demands of expediency.

If the circumstances are such that a quick bacteriological diagnosis cannot be obtained, it is better to give antitoxin without delay. Within the last few years the Boston Board of Health passed resolutions advising that all undoubted or suspected cases of diphtheria be given antitoxin without waiting for bacteriological confirmation. Hitchcock goes so far as to say that in his opinion any case which is clinically suspicious enough to warrant taking a culture is suspicious enough to warrant giving antitoxin without waiting to hear from the laboratory. Knowing how fatal delay is, such a recommendation cannot lightly go unheeded.

In suspected laryngeal diphtheria liberty of action is still further restricted. Now early recognition is even more imperatively demanded, and unfortunately will not wait upon the result of culture. The direct smear is frequently negative and consequently the diagnosis must usually rest upon clinical findings. The Boston Department of Health advises that all cases of croupy breathing in children which continue for more than six hours shall be considered as diphtheritic regardless of other clinical signs or the results of bacteriological examination. Undoubtedly, operative measures would be greatly reduced in frequency if all cases of croup which did not respond to treatment within two or three hours were given immediately a sufficient amount of antitoxin.

Many figures have been published which show the relative effects of early and late injections of antitoxin upon the mortality rate of diphtheria. Tabulations of the various statistics presented by observers all over the world, comprising nearly 100,000 cases, show that the death rate rises with delay in giving antitoxin from an average of 3.80 per cent. on the first day to 24.6 per cent. on the fifth day.

Experimental proof substantiates statistical evidence as to the value of early injections. The sooner the administration of antitoxin follows a lethal injection of toxin in the guinea pig, the smaller the amount of antitoxin needed to neutralize the toxin. The observations of Schick and his co-workers show that the main effect of anti-

toxin is an immunizing action, the proper dose producing immunity to later injections of toxin. But this action is not retroactive, that is, it has but slight effect upon toxin given earlier. Veeder has confirmed this work, finding that Schick's test made at the same time or previous to a subcutaneous injection were not suppressed, but tests made three hours after injection did not develop. Even after intravenous administration a test made six hours previously was positive and four hours before still faint. The principal action of antitoxin then is to protect against toxin produced after the antitoxin has been given. The clinical significance of this is to point out the need of the administration of antitoxin at the earliest possible moment. It is essential also to obtain the maximum degree of concentration in the shortest possible time, as degree of concentration and not total amount measures the curative effect of serum.

Clinical experience bears out the experimental proof. Thus Kiefer of Detroit reports no deaths among those receiving serum on or before the third day. Place states that of 431 cases of diphtheria developing in the Boston City Hospital, not one death occurred, nor was a single intubation required, though many were laryngeal affections. The writer observed a series of approximately 100 cases developing as a crossed infection, with 100 per cent. recoveries. Place further observed that early administration of antitoxin is of the greatest value in preventing the necessity of intubation and in checking the progress of the disease after introduction of a tube. He reports 119 consecutive cases, of which 47 per cent. escaped intubation despite a firm belief in early operation.

During 1917 there were reported in the City of Chicago 10,290 cases of diphtheria, of which 1,216 died, a mortality of approximately 11 per cent. Analysis of the circumstances of each of 75 of these deaths disclosed that 40 per cent. of them resulted from failure to call a physician sufficiently early; that 36 per cent. were due to obvious delay on the part of the latter in making a diagnosis; that 16 per cent. were the consequence of insufficient amounts of antitoxin, 52 per cent. in all due to error on the part of the physician; while the remaining 8 per cent. were apparently not preventable. Twenty-five per cent. of these dead children had a physician in attendance on the first day; 44 per cent. by the second day, and 66 per cent. by the third day, yet only 7½ per cent. were given antitoxin on the first day, no more than 16 per cent. had received it by the second day, and only 40 per cent. by the third day. In other words, of 50 children ill of diphtheria, at whose bedsides a physician was in attendance, 20 were allowed to go into the fourth day of the disease without antitoxin, and yet it has been a matter of common professional knowledge for many years that on the third day of diphtheria without antitoxin, nearly three times as many die as when serum is given on the first day. The average initial dose of antitoxin in these 75 cases was 7,300 units, four receiving none, two receiving 1,000, four 3,000, one 4,000, twenty-one 5,000, sixteen 10,000, and seven between 15,000 and 20,000 units.

The question of what constitutes the proper dose of serum in the treatment of diphtheria is still a matter of discussion. In 1894 Wm. H. Park advised quantities ranging from 800 to 2,000 units, stating that if no benefit was to be obtained from that dosage, it was doubtful if larger quantities would do more. Since then ideas have changed, but there is still a lack of unanimity of opinion, and especially a lack of appreciation of the mechanism of toxin action and neutralization. The object of giving serum is to neutralize toxin and to displace if possible that which has already united with the tissues. There is no way, however, in which the needed amount can be determined theoretically, in any given case, other than by applying the experimental results obtained by Schick, who found it necessary to calculate the dose of antitoxin according to the body weight. When amounts of antitoxin equal to 50 units per kilogram of weight were given, the protective effects of antitoxin on toxin injected simultaneously and on that injected 24 hours later was demonstrable, but not satisfactory. If the dose was increased to 100 units per kilogram, the immunizing action was very much greater, toxin reactions made 24 hours later usually being completely suppressed, while simultaneous tests were also somewhat subdued. Further observations showed that a maximal antitoxin effect is to be obtained from a dosage of 500 units per kilogram, larger amounts having no greater influence either on simultaneously or subsequently injected toxin. Retroactive effects of 500 units

of toxin injected three hours earlier is very slight and only little better than when doses of 100 units are given. If these conclusions are correct, a firm basis has been established for calculating the necessary dose.

Park also believes that weight is a great factor in influencing the dose. He found experimentally that if two children, one twice the size of the other, are given the same amount of antitoxin, the larger child will have about one-half as much antitoxin in each cubic centimeter of circulating blood as will the smaller child. As concentration is the important factor and not the total amount given, the size of the patient is of great importance in deciding the proper dose. Veeder, on the other hand, believes attempts to base the dose upon the body weight are fundamentally wrong. He is persuaded that two children of the same weight may absorb entirely different amounts of antitoxin or that the antitoxin absorbed may be of different potency.

Park found that most cases of diphtheria which enter the hospital already had blood which was feebly antitoxic, and thus antitoxin is not to be given with the idea that it is particularly necessary in order to neutralize toxin in the blood, but because it is necessary to get it quickly to the tissues. Unfortunately it passes only slowly from the blood to the cells, but large doses aid in more rapidly expediting its progress. Within 24 hours after a sufficient dose of antitoxin there is probably no free toxin left in the body except in the structures at the site of production.

The value of second injections must be considered. The consensus of opinion is that they are of no avail, as the concentration of the serum in the blood is increased too late to be of service. In view of the slowness with which antitoxin passes from the blood to the tissues and the need of great concentration in order to influence the already combined toxin, it is important that enough serum be given at the first dose. If the work of Schick is accepted, there should seldom be any question of a second dose. The only opportunity for error would lie in wrongly estimating the severity of the case in the beginning.

Park experimented to ascertain the advantage of the single dose. One goat was given 15,000 units in one injection, the other 5,000 units in three doses at eight-hour intervals. At the end of 18 hours the first goat had 12 units per cubic centimeter of blood and the second 3½ units, only the first portion having had any chance of being absorbed. Not until the end of the third day did 20,000 units in divided doses equal the effect of 15,000 units given at once. The good effects apparently to be attributed to second and third doses are the result of further absorption of the first dose.

In practice most men aim to give a sufficient dose at the first injection. Actually, however, the slow rate of absorption of antitoxin when given subcutaneously with the resulting delay in improvement of the patient, prompts many to repeat the dose because of fear that too small an amount was given at the outset. A needed second dose means that an insufficient quantity was given at the first dose, and this should not happen. However, if there is doubt of the sufficiency of the first injection, do not wait too long before repeating.

Very large quantities of antitoxin are advocated by a number of observers whose extended experience compels respect. Others do not agree on the advantages of extremely large doses. In order to ascertain the trend of authoritative modern practice in this respect, a questionnaire was sent to leading pediatrists and others with large experience in treating diphtheria.

Generally speaking, the largest number thought a dose ranging from 20,000 to 30,000 units to be sufficient, with 50,000 units as possibly the upper limit of usefulness. Two thought that enormous doses, up to 200,000 units, were of distinct advantage in the severest cases. All but one were guided in their estimation of the proper dosage by the amount of membrane and the degree of toxemia, while 75 per cent. considered to some extent the day of the disease. Comparatively few paid any attention to weight, and then, with three exceptions, only in a general way. Some were guided by other factors, the site of the membrane, the amount of local edema, and in several instances by the responses to treatment. Three out of every four thought the serum should be given in one dose. Veeder believes 25,000 units to be more than is necessary in any case. Wm. H. Park states it as his belief that 40,000 units will cure any case that a million will. Cowie regards 30,000 as more than enough in any instance.

In our experience a safe rule to follow has been that based upon severity and weight. One

estimates how ill the child is and then administers a dose ranging from 45 to 225 units per pound of weight. If any error is to be made it should be that of overestimating the severity. Generally speaking, the dose should be high rather than low. No harm can be done by giving an unnecessarily large dose and cost should be no bar. Apropos of the latter, in 1914, Kinyoun stated that using the newer methods of refinement and concentration, the cost averaged between 6½ and 8¼ cents for each 1,000 units.

As was previously shown, there has been a marked reduction in the mortality of diphtheria merely through the use of antitoxin, no matter how small the dose. We have seen that early injection and the use of the proper quantity have the greatest effect upon lowering the death rate, but still better results may be obtained by a more advantageous method of giving the specific. Especially in hospital practice, where the average day of admission is comparatively late, does the method of administration become of great moment. The method of choice, generally, is still the subcutaneous route, but the intramuscular and intravenous methods have attained popularity during the past few years and seem to offer advantages over the old method.

Morgenroth first demonstrated by experimental means the comparative rates of absorption by the different methods. He found that while the concentration in the blood was greatest after intravenous injection, within eight hours it began to diminish, whereas after intramuscular injection, at the end of eight hours, the content of the blood was nearly as great as after intravenous administration. Five hours after intramuscular injection the concentration was 5 to 20 times greater than after subcutaneous administration. Comparing the antitoxic content of the blood after subcutaneous and intravenous injection, Park found that in three hours there was, after the former, one unit of antitoxin and after the latter, 85 units; in twelve hours the quantities were 5 and 70, respectively, and only at the end of the third day were they equal, namely, 25 units in each cubic centimeter of blood. He estimates that the intravenous method gives at least tenfold the effect that may be expected from the subcutaneous method.

Intramuscular injections were first given in Neisser's clinic in Stettin, and in England have supplanted other methods almost completely. Rolleston claims that it is as simple as the subcutaneous method, less painful and that the serum is more rapidly absorbed. Compared with the intravenous method, it is superior because of its simpler technic and because it is less rapidly excreted. At the County Hospital it has also become the routine method of administration.

As indicated by the questionnaire, of all the replies received, two alone favor the subcutaneous route. Most of the others believe intramuscular administration probably the best as a routine measure. Some have had unfortunate experiences which would cause them to use the intravenous method in selected cases only, but all agree that it is indicated in the severely ill. About an equal number find difficulties of administration and the danger of shock deterrent except in unusual cases. Three men find no objection to the method, although believing it not always necessary, while one alone thinks that it will eventually be the routine method of administration.

From theoretical considerations we must regard as best the simultaneous intravenous and intramuscular injections, but from a practical standpoint the intramuscular method answers the purpose and is almost as efficient clinically. In septic and laryngeal cases better results are to be had with the intravenous method, though the technic is not always easy.

Fear of anaphylaxis should not have a dissuasive effect upon the administration of antitoxin in any case of diphtheria, nor should it prevent giving a sufficiently large dose. There has never been a death from serum at the Willard Parker Hospital nor among 40,000 cases at the Boston City Hospital. Park states that a large primary injection taken safely insures against fatal results from any subsequent injection.

Concerning the relationship between serum administration and the occurrence of post-diphtheritic paralysis, there is both experimental and clinical evidence to prove that the early use of antitoxin is the most important factor in preventing the occurrence of this complication. Rosenau and Anderson showed that antitoxin cannot influence paralysis if given just before the appearance of the latter, but if given 24 hours after infection, it saved life and greatly modified the resulting palsy, while if given 24 hours before or at the time of infection, a very small quantity prevented the development of the complication.

Rolleston presented figures showing that if serum was given on the first day of the disease, only 3.6 per cent. developed paralysis, but if it was delayed until the sixth day, in 27.1 per cent. paralysis appeared. The occurrence of paralysis after intramuscular injection seems to be much less common than after subcutaneous administration. Of 261 cases injected in the muscles only 12.6 per cent. showed paralysis, but two being severe and one fatal. This is an excellent record as compared with 2,300 cases injected subcutaneously, of which 20.7 per cent. became paralyzed, with 181 severe and 85 fatal cases.

CONCLUSIONS.

Consideration of the theoretical aspects of the question, together with the experimental, statistical and clinical evidence submitted, leads one to regard the following conclusions concerning the use of serum to be justified:

1. That the need of early diagnosis is more urgent in diphtheria than in almost any other condition.

2. That antitoxin should be administered at the earliest possible moment, in both known and suspected diphtheria, without too much loss of time waiting upon cultural confirmation.

3. That in any case a minimum of 5,000 to 10,000 units should be given, no matter how mild the case, but that under any circumstances 25,000 to 50,000 units is the largest dose from which benefit may be expected. The dosage should be based upon a consideration of the severity of the attack and the weight of the child.

4. That sufficient antitoxin for the entire course of the disease should be given in one dose.

5. That in the usual case of moderate severity the intramuscular route is the method of choice.

6. That in septic and laryngeal cases antitoxin should be given intravenously.

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EARLY DIAGNOSIS OF CARCINOMA OF THE STOMACH.

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The early diagnosis of carcinoma of the stomach is of the greatest importance because if proper surgical intervention is undertaken at this stage it will not only save the lives of patients in most cases, but also no recurrence of the affection will take place. An early diagnosis is not frequently made because of the very insidious onset of the disease and the disturbance is of such a mild character that the patient does not seek relief, or the disease may be diagnosed as one of the milder affections of the stomach.

Aids in the early diagnosis are: 1, a good history of the patient; 2, thorough physical examination; 3, chemical analysis as to the secretory functions of the stomach and also testing the motility; 4, examination of the stools for occult blood; 5, roentgenography; 6, the Abderhalden test, and 7, exploratory laparotomy.

1. *History.* In most instances the patient has reached middle life; he may give a history of repeated attacks of disturbance of the stomach which could be interpreted as ulcer. In other instances the patient may have had no stomach disturbance at all until the last two months or less, when he may have had a slight distress for which he could not account. Vomiting is very rare, but there sems to be a loss of appetite; a mild degree of distress after eating, and slight malaise. There may or may not be some loss of weight. There is no cachexia present. The family history does not assist much in the diagnosis. We certainly do not lay a great deal of stress on the statement that there has been cancer in any of the members of the family.

2. *Physical Examination.* As in all other instances, we must make a thorough physical examination of the patient; an examination of the respiratory system, the circulatory system, the nervous system, the glandular system, and a thorough abdominal examination. In many instances the findings from these examinations may be of a negative character. The abdominal examination may disclose a gastroptosis, an enlarged liver, or a movable kidney, which do not assist us in any way, but we may be able to elicit by deep palpation some tenderness in the region

of the pylorus, which is important, as in many instances it is the seat of the affection, or there may be some tenderness elicited just to the right of the ensiform process if the seat is on the smaller curvature near the cardia.

3. *Chemical Analysis of the Stomach.* In the chemical analysis of the stomach contents after an Ewald test breakfast the findings vary. There may be a hyperacidity which we find mostly in carcinoma following ulcer, or a normal acidity. We may find a subacidity. Very rarely I think we find an achylia. We find occult blood present. There is no retention of food except there be at the same time a hypertrophic stenosis of the pylorus from other concomitant causes or adhesions pulling so as to obstruct the outflow. To make a motility test, we use the Riegel test dinner, of which there must not be anything left on washing out the stomach five hours after ingestion.

4. *Examination of the Stools for Occult Blood.* Now, we come to an examination on which we must lay the greatest stress, namely, the finding of occult blood in the stools. This analysis ought to be made every day over a period of about one week, and the findings must be positive on each examination. On account of the great importance of the finding of occult blood in the stools in this affection, I shall go a little more into detail as to the chemical analysis.

I give my patient a good cathartic, then put the patient on a meat free diet. No meat soups or anything of that kind are given. Also in cleansing the teeth patient is instructed not to use a brush, but only a rag, as by brushing the teeth the gums may bleed, and the patient may swallow some of the blood and we might get a reaction from this and be misled. Certainly, the patient should take no medicine of any kind during examination. After three days the patient brings the specimen of stool, and continues to bring specimens every day for a period of a week. I have found that the Benzedine test is the most satisfactory, and I use it exclusively. We also have tablets on the market that are said to be very good. I have never used these tablets, and in a matter of such importance I prefer to make my own solution, no matter how good the manufactured tablet may be. The test can be made within five or ten minutes. If we have carcinoma present, we will find occult blood in every analysis of every stool. Certainly, we must be able to exclude any other source for the blood in the stool.

5. *Roentgenography.* When roentgenography shows a picture typical of carcinoma by the bismuth shadow thrown, then it is not an early diagnosis. If an obstruction at the pylorus is present to such an extent as to retard the outflow of the stomach contents, it is not due to the beginning carcinoma, if present, but due to concomitant causes. If carcinoma on the smaller curvature near the cardia exists, it fails also; therefore roentgenography cannot assist us, no matter how much it may aid us in making a diagnosis in some other gastric affections. My belief is that it cannot aid us materially, if it can do so at all, in the early diagnosis of carcinoma of the stomach.

6. *The Aberhalden Test.* The Abderhalden theory is, that there are ferments in the blood plasma which are of a defensive character and will build off the tissue, which is the cause of these defensive elements. The organism, as a whole, permits only such elements in the circulation as are good for it. Abderhalden has proven that in early pregnancy defensive ferments are present in the blood plasma which will build off the placenta.

As to carcinoma, Abderhalden has also proven that there are defensive ferments present which will build off carcinoma, but these ferments will not build off the placenta, and that ferments present in pregnancy will not build off carcinoma. Furthermore, the defensive ferments present in a cylindrical cell carcinoma will not build off flat epithelial cell carcinoma. The method is quite complicated, and on that account failures possibly have occurred which may have been due to some faulty technic, or any other oversight on the part of the analyzer. I have not used the method at all, consequently I am not able to give you my views on it, although I am inclined to believe that this method, by simplifying the process, may in the future be of the greatest assistance in the early diagnosis of carcinoma. The method fails in carcinoma when there is marked cachexia; it also fails when there is high leucocytosis.

7. *Exploratory Laparotomy.* As to the exploratory operation, we ought to use every means at hand which will help in making a complete diagnosis, and if there should be cases in which a doubt seems to exist, I think we are justified

under the modern surgical procedure to have recourse to an exploratory incision.

There are a few other methods which have been tried and found not to aid us very much in the early diagnosis of carcinoma. I shall mention, first, the glycyltryptophan test (Fisher & Naubauer). The hypothesis is that there are in the stomach contents in carcinoma ferments present which split up the glycyltryptophan, but glycyltryptophan is also split up in other affections, like achylia gastrica. Blood and also trypsin, which are very often present in the stomach contents when there is no carcinoma, will likewise split it up. Second, Solomon's test. This test is to find albumin present in the emptied stomach by lavage with water and the Esbach's method to determine the albumin present. In the early diagnosis this test does not assist us either. Third, Salcowaski's test. This is a test for colloidal nitrogen in the urine. In carcinoma the urine contains a high percentage of this nitrogen. Other affections, like pernicious anemia, diabetes mellitus, and chronic myocarditis will also give a high percentage of colloidal nitrogen; therefore, it is not of much aid. So we may say that at the present time the most reliable aids in the diagnosis of beginning carcinoma are a good history, a thorough examination of the patient, and most important of all, the occult blood findings in the stool as I have already stated.

Gastroscopy has been tried by the aid of very ingenious instruments, but I fail to see how we are able to detect a small affection near the pylorus, as we cannot manipulate the tube to such a great extent as to get a good view of the pylorus.

REPORT OF CASES.

Case 1. Patient, Charles M. (Polish), aged 42 years; occupation, janitor. Patient came to my clinic in October, 1915, complaining of stomach disturbance. A diagnosis of gastric ulcer was made and patient was put on a proper diet. Patient felt well for about four months, when he presented himself again in February, 1917, with complaint of stomach disturbance, which seemed to be a recurrence of the ulcer. The analysis of stomach contents after Ewald test shows:

Free Hcl. 52
Total Ac. 85

Patient was put on proper diet again, with no results. Upon questioning the patient closely as to whether he had followed the diet strictly which had been given him the year before in October, he said yes, but he always had a disturbance after eating the mustard. He had mistaken the word custard and had used mustard, which was not included in the diet.

Patient was sent to the hospital and a bland diet given. A stool examination was made for a period of about one week and occult blood was found on each analysis. I made a diagnosis of beginning carcinoma, and advised operation, which was performed by Dr. Norman Kerr. Pylorectomy and gastrojejunostomy were done, and a callous ulcer, with a nodule the size of a small pea, was found near the pylorus, and a slight infiltration of the pyloric orifice. Patient made a protracted recovery.

Upon histologic examination of the specimen, it was found to be carcinoma of the medullary form.

Patient has gained about 25 pounds, and is feeling well one year and ten months after the operation.

Case 2. August W. K., Peoria, Illinois; 66 years old; cashier, referred to me by Dr. Norman Kerr.

Past History. Patient had typhoid 14 years ago. Four years ago he had stomach trouble which recurred at intervals up to the present time. Patient now has a dull, aching, distressed feeling after meals, which lasts for about two hours. Belching relieves it. Patient does not vomit; he has lost about 15 pounds in the last year.

Examination reveals a very small aneurysm of the subclavian and abdominal aorta; also gastroptosis. On abdominal palpation slight tenderness is found in the region of the pylorus. Chemical analysis of the stomach contents after Ewald test breakfast showed normal acidity, and occult blood present. In examining the stool for occult blood I found it present at each analysis for a period of a week. Roentgenography negative; also no retention of bismuth meal after 6 hours. One Riegel test dinner (motility test) reveals a slight retention.

A clinical diagnosis of beginning carcinoma at the pylorus was made, and operation advised and performed by Dr. Norman Kerr under local anesthesia. Pylorectomy and gastrojejunostomy were done. The diagnosis of carcinoma was verified by the operation. The carcinoma was about the size of a small pea on the pylorus, with slight pyloric infiltration. In this case the diagnosis was based only on the history of the patient, slight tenderness in the pyloric region, and above all, the occult blood findings in the stools as aforesaid.

Histological examination shows a round cell carcinoma. Patient left the hospital two weeks afetr the operation, is feeling well, and has gained about 20 pounds in weight.

In conclusion, let me say that in every individual above 40 years of age, with digestive disturbances, no diagnosis should be made until carcinoma is excluded; then I believe that with the diagnostic aids I have enumerated we may be able to make a diagnosis of carcinoma in its early stage, if present.

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THE MUCH NEGLECTED VERU MONTANUM.

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The veru montanum or as it is called the colliculus seminalis or caput gallinaginis, is situated on the floor of the prostatic urethra. On each side of the veru is a slight depressed fossa, the floor of which is perforated by numerous apertures, the orifices of the prostatic ducts from the lateral lobes of the gland. The ducts of the middle lobe open behind the veru. At the forepart of the veru in the center is a depression, the prostatic utricle or sinus pocularis and upon or within its margins are the slit-like openings of the ejaculatory ducts. The sinus pocularis forms a cul-de-sac about ¼ inch in length which runs upwards and backwards in the substance of the prostate behind the posterior commissure, a band of tissue which joins the lateral lobes behind the posterior wall of the urethra. The prostatic utricle represents the remains of the Muellerian duct and consists of a blind sac with folded mucous membrane lined with a two rowed ciliated epithelium which dips down to form short tubular glands. The veru montanum is provided with many blood vessels the same being derived from the internal pudic, inferior vesical and middle hemorrhoidal. The nerves are derived from the hypogastric plexus.

The foundation of the veru consists chiefly of connective tisue, elastic fibres and a few non-striated muscle fibres, while its glandular supply is quite rich and the cavernous tissue is rather scant.

No. 1 No. 2 No. 3

No. 1. Veru with anaemic mucosa, natural size.
No. 2. Veru with hyperaemic mucosa and moderate enlargement.
No. 3. Soft infiltration of the colliculus.

No. 4 No. 5 No. 6

No. 4. Hard infiltration of the colliculus.
No. 5. Soft infiltration of mucosa caused by chronic gonorrhea.
No. 6. Considerable hard infiltration of mucosa of deep urethra.

The relation of the diseases of this small organ to a variety of symptoms of functional urinary disturbances, of impaired sexual activity, of a number of remote reflex symptoms and sexual neurasthenia, while recognized by the urologists for years, have not received the same attention as other lesions in the urogenital tract. This might partly be due to the scarcity of the literature on this subject and partly caused by the lack of recognition of the importance of the same and of teaching urethroscopy in the curriculum of the medical college. And yet lesions of the colliculus are almost as numerous as all other pathologic conditions in the urinary tract and certainly as frequent as posterior urethritis. Indeed I venture to say that colloculitis and its sequelæ with few exceptions constitutes the last chapter in the history of gonorrheal urethritis.

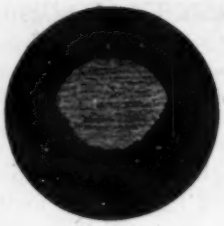
Other etiologic factors are sexual excess, prolonged masturbation, chronic prostatitis, repeated traumatism, like long horse back and bicycle rides, and coitus interruptus. Other lesions causing symptoms of colliculitis but having no connection with gonorrhea are polypus, erosions, fissures, tubercles and scars following an improperly performed urethrotomy.

All sorts of painful sensations in the urogential sphere are complained of, most of which, however, are not pathognostic of this particular condition. In milder cases tickling or heat somewhere in the urethra is mentioned, pressure or the feeling of a foreign body in the posterior urethra, burning or scalding before, during or after urination and urgent calls to urinate, oftentimes burning pain

during or after each ejaculation, or after a hard stool. Neuralgic pains in the perineum radiating towards the inguinal region, the epididymis, the thighs and along the sciatic nerve, are frequent symptoms; others have intense pain along the sacral or lumbar nerves or in the abdomen above the symphysis. Horse back riding, driving over rough roads, jolting or jumping or prolonged sitting seem to increase the suffering in a proportion of these cases.

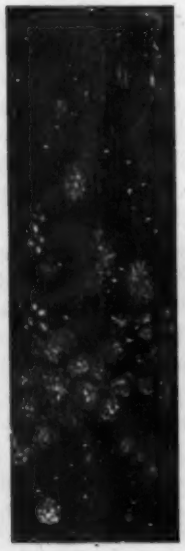
Involuntary seminal emissions, prostatorrhea or spermatorrhea, the latter appearing after urination or defecation, are another train of symptoms. Blood stained seminal fluid is occasionally noticed, this being due to readily bleeding granulations which are covering the colliculus and should be differentiated from bloody semen caused by inflammation or tuberculosis of the seminal vesicle. Chiefly complained of in chronic cases are premature ejaculation, weak erections and also complete sexual incapacity.

The pathologic changes underlying all these symptoms vary according to the stage in which they are found, from edema of the mucosa and hyperemia in the beginning to granulation tissue, papillary hypertrophy and fibrous sclerotic changes in the advanced cases. The close proximity of the ejaculatory ducts and the extension of the inflammatory process to them explains the sexual disturbances, particularly the premature ejaculations and spermatorrhea. The extension of the lesion to the fossula prostatica—the part of the urethra which borders on the colliculus below and the vesical neck above—is responsible for the vesical symptoms. The rich supply of sympathetic nerve fibres establishes the line of communication between the local process and the multitude and variety of reflex symptoms mentioned before.



No. 10

No. 10. Advanced chronic inflammation of the vesico urethral border.



No. 7 No. 8 No. 9

No. 7. Extensive papilloma formation in anterior urethra.
No. 8. Papillomata in deep urethra.
No. 9. Border line between deep urethra and bladder, showing moderate hyperaemia.

For the purpose of diagnosis we have to rely on the bougie a'boule and the urethroscope. The olive tip bougie which passes over the healthy posterior urethra without pain and without encountering a perceptible obstacle along its course into the bladder will cause the patient intense pain especially when travelling over the colliculus and upon withdrawing the bougie we always notice a more or less distinct jolting as the olive tip glides over the enlarged and sometimes deformed veru. In the cases which still show active inflammation more or less blood will be found on the olive tip when withdrawn.

The best and most positive information, however, is to be obtained through the urethrascope since all the pathologic changes mentioned before can be plainly observed by the eye.

The lesions are usually found on or around the veru itself, some of them anteriorly and some in the fossula, the so-called supra-veru region. The latter one is most frequently neglected in the course of an examination even by those who are more or less experienced in the employment of the urethroscope. Most commonly observed is edema and swelling of the veru itself, which in some cases shows irregular protrusions and considerable distortion. In the supra-veru region we frequently notice on the floor a thickened ridge, in

other cases granulations which upon the slightest touch are likely to bleed profusely. In the same territory we encounter the above mentioned polypi and papillary growths. The veru itself, especially its lower part, is also the seat of cystic bodies. The utricle is oftentimes found dilated and in some cases viscid fluid or pus can be seen emanating from the same. It may be stated here that in many cases the clinical symptoms as presented by the patient are entirely out of proportion to these local pathologic changes; that is to say that slight lesions frequently produce very severe subjective symptoms and show great obstinacy to any kind of treatment, while in others presenting very indefinite and mild symptoms we are quite surprised to find severe and complicated lesions.

The treatment is divided into topical applications or surgical manipulations by the same route. Silver nitrate, 20 per cent. solution on a saturated swab, gives early and satisfactory results in the inflammatory stage, in granulations and erosions; it should be applied but once in a week or ten days and where conditions demand it, such as urethral or vesical infections, daily irrigations with suitable medicated lotions between these topical applications should be resorted to. That other lesions found to exist in the urogential tract, especially in the urethra, should be attended to at the same time, need hardly be mentioned.

In the presence of luxuriant and profusely bleeding granulations it is advisable to first crush these by large caliber metal sounds introduced every other day for several weeks before commencing the urethroscopic treatment.

Polypi and papillomata may be snared off or burned off with the electric cautery or removed by fulguration, curetted or torn off with special urethral forceps. Most of them, however, can be scraped off with the edge of the urethroscopic tube or a gauze swab on an applicator and the raw surface left after their removal should be touched up with a 30 to 50 per cent. silver nitrate solution. The bleeding associated with these procedures is of a negligible character. Where interstitial tissue is seen to have invaded the colliculus, dilatation, application of heat by suitable intsruments and absorbing remedies are indicated.

I do not wish to be understood as saying that all cases of sexual neurasthenia and debility are due to colliculitis but in the presence of such symptoms it should be our duty to ascertain the existence or absence of this lesion and if found to be present we should try to eliminate the same as a probable cause of or as at least aggravating the neurosis. On the other hand, when urinary symptoms prevail we should not be satisfied with the results of our investigation of the case from the various angles unless we have also drawn the veru montanum into the circle of our consideration.

5 North Wabash Avenue.

THE RELATION OF SYPHILIS TO CARDIOVASCULAR DISEASE.

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It is not my purpose to occupy your time about the better known effects of syphilis on the cardiovascular system; aortitis, aneurism, the associated aortic regurgitation and various types of arteriosclerosis have been so thoroughly discussed that I would not be justified in taxing your patience with a discussion of these subjects.

However, certain other phases of cardiovascular syphilis, though the subject matter is not new, have to a large extent escaped the careful attention of the profession, and it is to these other types of disease not so commonly recognized as syphilitic in origin that I would like to direct your attention. Of late years Cabot has written upon the subject. Fordyce and especially Brooks and Carroll have contributed extensively to our knowledge in this field and Warthin has emphasized the effects of syphilis on the heart from the pathological side.

To present the subject as concretely as possible, I want to report briefly a few illustrative cases: The one I will first take up served to excite my own interest in the subject and is representative of the type of cases I have in mind.

The patient, a colored man, 51 years of age, was seen at the Post Graduate Dispensary: he came seeking relief for cough and epigastric pain; he had been an excessive user of whiskey. Syphilis was denied. Physical examination revealed a heart enlarged considerably, both to the left and right; the second aortic sound was markedly ringing and accentuated; liver was palpable about two fingers breadth below the costal arch in the mammary line; there was moderate edema of the ankles. Urine showed a

sp .gr. of 1009; no albumin, sugar or casts; the blood pressure was systolic 234, diastolic 150. Manifestly we were dealing with a case of broken compensation secondary to chronic interstitial nephritis; perhaps better, secondary to a sclerosis of the kidney of the benign type as classified by Volhard and Fahr. Treatment for broken compensation, digitalis, catharsis, rest, was begun and the patient improved, but not sufficiently to permit his return to work; by occupation he was a waiter. He was seen from time to time; while his improvement was distinct it was not satisfactory. Some two months after the first examination he presented himself with the statement that he had rheumatism in his thigh: examination revealed two nodules, the size of a hickory nut or larger, and intra-muscular. A diagnosis of gummata was made: the Wassermann reaction was strongly positive. The patient was put on mercurial inunctions; the gummata disappeared and the circulatory symptoms receded to a marked degree. In a short time he was able to return to work and for eighteen months, to my knowledge, the specific treatment in this apparently classical case of chronic interstitial nephritis made the difference between a man capable of making his own living and a chronic invalid. He was seen from time to time; eight months after the first blood examination he showed a negative Wassermann reaction and again four months later. His blood pressure continued high; sixteen months after his first examination he showed a systolic pressure of 250, a diastolic of 145, practically the same as when it was first taken. He has not been heard from since last January, at which time he was seen for a "cold," but expressed himself as otherwise "fine."

Stimulated by the results of this case my attention has been specifically directed to the myocardial weakness occurring as the result of syphilis. In the past four months a number of cases have been seen which have presented similar features. Most of these have been seen at the Northwestern Dispensary and only recently have we been able to make a routine use of Roentgen-ray examinations to exclude the presence of aneurism. However, in none of the cases I will report did physical examination justify the diagnosis of aneurism.

A colored man, aged 39, was first seen at the Dispensary in February, 1917; he complained of frequency of urination, a reddish color of the urine, and a shortness of breath on exertion. He admitted syphilis twenty-five years before and gave an indefinite history of rheumatism about one year prior to his present sickness. His heart was enlarged to the left; blood pressure, systolic 120, diastolic 78; urine negative. This patient, who was under the care of Dr. Chase, now in France with the Northwestern unit, was found to have a pulse rate of 84, with an apparent bigeminy, two beats close together, followed by a long pause. Dr. Chase made a polygraphic tracing and showed that the pulsus bigeminus was not due to premature ventricular contractions, but was the result of a 3-2 heart block, every third auricular impulse failing to excite a ventricular response. The Wassermann reaction was strongly positive. Under mercurial treatment the heart block disappeared, the patient felt much better; he soon stopped his visits to the dispensary.

Another patient, a colored man of 23, first seen March 11, 1917, complained of pain about the heart, occurring paroxysmally: the pain was very severe, sharp and increased on exertion. He stated that he had been troubled in this way for three years and had always gotten better when treated for syphilis. His heart was normal so far as physical examination could show; there was no evidence of aneurism. Liver was palpable. The Wassermann reaction was strongly positive. We cannot exclude the possibility of angina, secondary to a syphilitic aortitis in this case. Eight days after the first examination, after having been on specific treatment, he reported himself as much better and then dropped out of our sight.

January 13, 1917, we first saw "K. J.," a colored woman, 48 years of age. She gave no history of rheumatism, complained of pain in the precordium, chronic cough, swelling of right leg and foot, and occasional hemoptysis. She had borne nine children, seven of whom died in infancy. Save for evidence of an increased area of dullness, cardiac examination was negative; pulse 88 and regular; blood pressure systolic 200, diastolic 125; urine sp. gr. 1008, no albumin, sugar or casts. The Wassermann reaction was strongly positive. There was moderate ascites, and there was evidence of a periostitis of the right tibia. Under mercury and digitalis she improved rapidly and soon ceased her visits to the dispensary. In July she returned with symptoms of broken compensation, which responded readily to the same line of treatment.

"G. H.," a colored woman, 31 years of age, was first seen April 24, 1917. No history of rheumatism or venereal disease. Her complaint was of dyspnea and increasing weakness. There was a diastolic murmur along the left border of the sternum; cardiac borders could not be satisfactorily determined; the arterial signs of aortic regurgitation were lacking, and a tracing showed the plateau of aortic stenosis. No evidence of aneurism was present on physical examination. Pulse was 90; systolic pressure 135, diastolic 70. Wassermann strongly positive. Under treatment with mercury she improved promptly. She was seen again in October, with similar findings, which improved promptly under a second course of mercury.

In the past two months we have seen in the County Hospital three cases of the type under discussion. One, a man of 51, with no history of rheumatism or tonsillitis, but with a strongly positive Wassermann, had a decompensated heart with the physical signs of mitral disease. The x-ray showed enlargement of the heart, with no evidence of aneurism. This patient failed to respond to treatment and died in the hospital. A second patient, a colored man of 68, gave a history of rheumatism (17 years ago) and of

syphilis (18 years ago). He had a marked decompensation; systolic pressure 210, diastolic 165. X-ray examination showed an enlarged heart; left heart and aorta increased; right auricle increased; configuration of heart was that of a mitral and aortic lesion; small left pleural effusion. The anatomical diagnosis was mitral regurgitation. The Wassermann reaction was four plus. This patient improves under treatment but is now in the hospital for the third time since last July. A third case is that of a man, aged 51, who had in the two months just prior to his admission eight or nine attacks of nocturnal cardiac asthma. The Wassermann reaction was strongly positive. Under mercurial treatment he was in the hospital four weeks, during which time he had no attack.

A case presenting different features was that of "F. D.," a colored man, aged 32, who was first seen May 18, 1917. His complaint was of abdominal distention with a slight dull pain after eating; he had limited his food because of this consequent distress. He had vomited occasionally. There was a history of typhoid seven years previously; all other diseases, including rheumatism and syphilis, were denied. Physical examination was negative except for the above mentioned abdominal distention. Gastris analysis showed total and free acids at a high normal level; otherwise negative. Blood pressure, systolic 205, diastolic 142. Urine showed a sp. gr. of 1011, a trace of albumin and a few granular casts; a few weeks later, a 24 hour specimen showed 2500 c. c. of urine of a sp. gr. of 1017; patient could concentrate and dilute the urine normally; phthalein excretion was 55 per cent. in one hour. The Wassermann reaction was strongly positive. Under mercurial treatment the symptoms disappeared promptly; the blood pressure readings were lower, but remained high; thus on July 16 the systolic pressuer was 184, diastolic 128. He was not seen during August and September. Late in October he returned with a recurrence of his abdominal symptoms; at this time the Wasserman was negative; nevertheless, the symptoms again cleared up quickly under mercurial inunctions. Here we were dealing with a case, which might have been regarded as an early case of chronic interstitial nephritis, and would have been treated in vain, in default of recognition of the etiologic factor.

I have reviewed these cases briefly that I might present to you concretely the theme of this short paper. The argument I wish to maintain is this: there are, in the aggregate, many cases of so-called myocardial disease, and of hypertensive states, which will be regarded as primary, and, therefore, will be treated ineffectively, if the possibility of syphilis as an etiologic factor is not kept in mind; furthermore, such cases will show definite improvement when specific treatment is instituted in addition to the symptomatic treatment employed.

Cabot has proposed a reclassification of cardiac disease on the basis of the etiology, accepting four main types of disease: the rheumatic, syphilitic, nephritic and arteriosclerotic. Admitting the possibility of overlapping in his classification, he contends and I believe rightly that cardiac diagnosis is not complete with the anatomical diagnosis nor with a determination as to the question of compensation. For successful treatment it is necessary, as far as possible, to gain a clear comprehension of the underlying etiological factors. In the discussion of Cabot's paper, Brooks said: "Most of us now believe that a considerable percentage of hitherto unclassified myopathies of the heart are of syphilitic origin," and Stengel remarked: "The kernel of the nut is that syphilis is an important cause of heart disease, and it should not be forgotten." Before this paper of Cabot's apeared, Brooks had published papers on the relationship of syphilis to disease of the heart. In one of these papers he stated: "In my postmortem series I find that 66 per cent. of my luetic cases, including well and incompletely treated instances, die as a result of or with serious circulatory disease, apparently of specific origin." His anatomic study of 50 cases showed that "The epicardium or visceral pericardium was diseased in 28 of the 50—the myocardium was found diseased in 44 of the 50 cases, and true cardiac gummia was present in 5 instances. The most frequent change consisted of small round-celled infiltration about the arterioles or of foci of fibrosis." And Warthin, whose work has excited so much interest, in a comparatively recent article, makes this statement: "Latent syphilis, I believe, will be found to be the chief factor in the production of myocardial insufficiency and the cardiovascular renal complex, apparently so rapidly increasing."

As to treatment, Brooks and Carroll, and Fordyce, recommend mercury and salvarsan, in addition to potassium iodide. In advising salvarsan, they acknowledge the occasional serious reactions, and it appears that their main reliance is mercury. Personally, I have not felt justified in advising salvarsan in these cases, but have relied particularly on mercury; potassium iodide has also been used in most of my cases.

TO SUMMARIZE.

1. Many cases of myocardial insufficiency of hitherto unrecognized etiology (so-called clinical myocarditis) have developed on a syphilitic basis.

2. We must not overlook the fact that mitral insufficiency in these cases, which is often found when a patient is first seen, may be a relative or muscular insufficiency, and not the result of organic valvular disease.

3. Certain cases of hypertension, commonly regarded as chronic interstitial nephritis, have developed on a syphilitic basis.

4. The type of cases under discussion will not respond satisfactorily to treatment until the etiologic relationship is recognized and proper treatment applied.

5. Mercury or mercury and salvarsan are definitely indicated in these cases; potassium iodide will not suffice.

6. In the light of Warthin's recent work an anatomical cure cannot be promised; clinically, however, the results of treatment are, in general, excellent.

104 South Michigan Avenue.

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SPECIAL DISORDERS OF THE HEART FROM GOITER.

E. P. Sloan, M. D.,

BLOOMINGTON, ILL.

Pressure symptoms with circulatory disturbances from pressure on the blood vessels in the neck have been present in 263 out of 870, or 30 per cent, of our operative goiter cases, and substernal or intrathoracic lobes or projections were found at operation to be present in 360 out of 870, or 40 per cent.

Later effects of goiter may include myocarditis from disturbances of the heart; but the first effect of every goiter upon the system is an increased or abnormal suprarenal activity.

The action of the suprarenal secretion which is thrown into the blood stream and carried directly into the right side of the heart causes overexertion of the heart muscle against a rigidly contracted arterial system, with lessened caliber of the veins and resulting distention of the capillaries from this high blood pressure.

There is, of course, lengthened capillary invasion in all tissues, during which some change occurs in the blood that makes it irritating to the lining of the heart and blood vessels. This causes a low grade of endocarditis and by affecting the cells of Purkinje and the plexus of nerves under the endocardium causes a disturbance of the mechanism of the heart.

The first and constant effect of all kinds of goiter is to cause disturbances of the mechanism of the heart. That these disturbances are caused by goiter is proven when they are removed by goiter operation.

They were not understood until explained and made clear by the aid of the electro-cardiograph. Thorough understanding of the mechanism of the heart is necessary for diagnosis. Then it is possible to diagnose them with certainty with the usual means of physical diagnosis.

The pace of the heart is controlled normally by impulses that arise in the region of the junction of the superior vena cava and the right auricle from a club shaped node of specialized tissue, the so-called sinus node. The impulses are transmitted around the walls of the auricle to the ventriculo-auricular node and then through the bundle of "His" to the plexus of nerves under the endocardium and then to the cells of Purkinje in the ventricle. New points can develop in the auricle and even in the ventricle from which other impulses arise.

Disturbances of the mechanism of the heart are usually classed under seven headings, as follows:

1. Sinus arrhythmia.
2. Heart-block.
3. Premature contractions.
4. Simple paroxysmal.
5. Auricular flutter.
6. Auricular fibrillation.
7. Alternation of the heart.

I will discuss these hurriedly, as time will not permit me to take each up separately and consider it in greater detail. I want to acknowledge the assistance I have received from Lewis' works on these mechanisms.

Sinus arrhythmia is the normal variation in the regularity of the heart during respiration. More pronounced in the young.

Disorders of the mechanism of the heart are either disturbances of the transmission of the impulse or else come from new impulse formation. These new centers may develop in the auricle or in the ventricle. It is very important that we differentiate between the disorders of the mechanism of the heart that arise from the defects in

transmission of the impulse and those that arise from new sites of the impulses. Those due to defects of transmission of the impulse are usually classed under the head of *heart-blocks*. This class of disturbances of the heart are not due to goiter and are not influenced by the removal of goiter that may be present.

It is sometimes difficult to differentiate between *heart-block* and *premature contractions*, due to the development of new points of impulse excitation. When at regular intervals a beat is dropped or the pause between the beats is lengthened, it is due to heart-block or failure in the transmission of the impulses to the ventricle or to a premature contraction. By listening at the apex you can hear the premature contraction of the ventricle during the lengthened intervals between the pulse beat, while if it is heart-block, the heart remains silent through the interval. *Premature contractions* are more common, especially in the young.

If the pulse beats are coupled and the pause between is of regular length, either every third impulse fails to reach the ventricle or else every third regular impulse from the auricle reaches the ventricle while it is in contraction from a premature or extra contraction, in which case the impulse from the premature contraction does not reach the wrist and every third regular pulse beat is lost. When the ventricle beats at twice the pulse rate, it is due to premature contraction, disturbing every second regular contraction. When the ventricular and pulse rate is halved paroxysmally, it is always the result of heart-block.

Simple paroxysmal tachycardia is supposed to be caused from exertion, emotional disturbances, digestive disorders, valve lesions, disease of the heart muscle itself, infection, syphilis, heredity, etc. Nearly all cases upon careful investigation will be found to really belong under the head of premature contraction or *auricular* flutter.

When auricular flutter is present, new points of impulses have become sensitized in the auricle, usually near the sino auricular node. The auricle is in a state of constant contraction. As soon as it relaxes enough to be susceptible to a new impulse, an impulse from some point is ready for it. The usual auricular rates are from 260 to 320 per minute. The ventricle usually responds to only half the impulses, its usual rate being from 130 to 160 per minute. There is no change of rate by posture, rest or exercise; the rate is about the same all the time for weeks or months. If the action of the ventricle is irregular, a little exercise will sometimes immediately exhilarate the ventricle action and give perfect regularity of the pulse.

After a time each sensitized center becomes a node that controls a small portion of the wall of the auricle. It loses the power to contract as a whole. The spasm or tonic contraction of the auricle subsides and the numerous areas contract independently of each other. The auricle dilates and admits the blood freely. Complete contraction of the auricle cannot occur. This condition is called *auricular fibrillation*. The numerous impulses from the numerous centers reach the ventricle. The one that reaches it when it has relaxed to the point that it will respond to an impulse, is the one that controls the next contraction of the ventricle. Consequently the pulse is very irregular, the faster the pulse rate, the greater the irregularity. The pulse is never quite regular and seldom do two beats of precisely equal character occur together. The heart sounds vary in intensity and rhythm, while in auricular flutter the first and second sounds are present with each cycle that gives a pulse beat in fibrillation. Numerous first sounds are present, but the second sound only when the ventricle contracts. Auricular fibrillation is really the result of flutter, not an advanced stage of auricular flutter.

When auricular flutter is present, a general anesthetic is extremely dangerous, especially for goiter operation. Unrecognized cases of auricular flutter account for a large number of sudden deaths during an operation or very shortly afterwards. Patients with auricular fibrillation usually stand anesthesia and shock of all kinds much better than one expects them to. Patients frequently complain of fluttering sensation over the chest and neck for months before flutter or fibrillation is recognized.

CONCLUSION.

Goiter causes endocarditis, premature contractions, auricular flutter, auricular fibrillation and myocarditis. Removal of goiter benefits or cures these conditions when it has caused them. Heart-block and defects in transmission of impulse are not caused by goiter and are not benefited by removal of a goiter that may be present.

OBLIQUE INGUINAL HERNIA.*

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CHICAGO.

The hernia committee, appointed at the 1916 Congress of the National Safety Council, sent out a questionnaire to ascertain the causes of herniæ, as revealed to surgeons by the anatomical findings at the time of operation. The tabulated experience of surgeons operating herniæ cases would be more conclusive, it appeared to your committee, than any other available data, in illuminating this vexed problem.

The surgeons, to whom this questionnaire was addressed, were requested to tabulate, if possible, their cases available for such a report as follows:

1. Congenital hernia, with the age at which the hernia was determined.

2. Acquired hernia, without the history of trauma.

3. Traumatic hernia—under this form of hernia give the condition of the sac, whether caused by the trauma or whether of a congenital type or due to anatomical defects of parts involved in the hernia.

Your committee procrastinated, and this questionnaire was sent out too late to secure the co-operation of all the surgeons addressed. In the replies received it was disclosed that relatively few of the doctors made a statistical study of the cases they have examined. Few of the operating surgeons take notes of the findings at the time of operation from which tabulated data may be derived for the statistical study of the causes of herniæ.

The responses received, being general, rather than specific, this preliminary report will be of like nature.

The hernia committee has failed to meet as a committee to summarize the reports sent in; this work has been assigned the secretary.

PRELIMINARY REPORT BY THE SECRETARY.

In submitting this preliminary report, your secretary feels that the labors of the committee should be continued another year, or that a new committee be appointed to whom the valuable material already collected may be given.

Hernia cases puzzle employers and perplex referees and industrial boards in every state. The educational campaign on hernia should certainly be continued.

It is unfortunate that some physicians, as well as the laity, employ the term rupture as a synonym for hernia, thus confusing the public mind.

It is likewise unfortunate that the term traumatic hernia is found in the literature and on the tongues of physicians and attorneys, when such a term as latent hernia, or developmental hernia, would beetter explain the underlying anatomical defects that are responsible for nearly all herniæ.

As 92 per cent. or more of all herniæ are of the oblique inguinal type, occurring in the groin, along the course of the spermatic cord, our inquiry is chiefly concerned with this type of hernia. Incisional hernia, umbilical hernia, femoral hernia, and direct inguinal hernia, all of which are admittedly caused by anatomical defects, are usually classified as due to sickness, rather than injury. The storm center is the oblique inguinal hernia.

1. The sac is the essential part of a true hernia. The hernial sac is a process of peritoneum. The peritoneum is a tough resistant membrane, no neasily pouched out to form a sac.

2. Efforts made on the cadaver at the internal ring, in an attempt to force the finger from within into the inguinal canal, are futile. "No finger is strong enough to stretch the normal peritoneum so as to form a sac," says Dr. R. W. Corwin. Others have tried this experiment.

3. For a hernia to arise suddenly there must necessarily be a pre-existing sac. The sac may exist for years, as an embryonal remnant, and remain empty. The filling of the pre-formed sac with omentum or a loop of intestine, is generally the first intimation of the existence of the hernial sac.

4. The palpating finger of the examining surgeon will fail to diagnose a hernia unless the sac fills with fluid or solid contents. Hence, in plants where careful physical examinations are conducted the record card may show that an employe had no hernia when he entered the service, yet a hernia may subsequently develop, and, at the time of operation, the hernial sac may be quite large and thick, indicating that the hernia is not a recent one.

5. The peritoneal fluid serves as a dilator for the sac of a latent hernia before the hernia acquires solid contents. When sufficiently stretched to admit a segment of intestine, this, in turn, serves as a dilator.

6. The descent of the testicle leaves a weak place in the belly wall. The processus vaginalis is an extension of the peritoneal cavity into the inguinal canal, caused by the descent of the testicle; nature is not a perfect architect, an imperfectly closed processus vaginalis predisposed to oblique inguinal hernia.

7. There is a dimple in the peritoneum and the infundibuliform fascia, covering the internal ring; this dimple may be deepened and widened by oft-repeated increases of the intra-abdommal pressure.

8. This dimple at the internal ring deepens to form a sac for the hernia more rapidly if the inguinal canal is too patulous.

9. The factors producing an overpatulous inguinal canal are: (*a*) Inherited, thin abdominal muscles. (*b*) Excessive fat, by increasing the mobility of the peritoneum, and by pressure atrophy of the abdominal muscles. (*c*) Emaciation, by absorption of the subperitoneal fat, and the fat within the tissues of the spermatic cord.

10. The developmental hernia (into the pre-existing processus vaginalis) and the acquired hernia (the shoved-out peritoneum and infundibuliform fascia) are both accelerated by an overpatulous condition of the inguinal canals thus produced. Both types of oblique inguinal hernia are thus due to anatomical defects.

*Proceedings of the sixth annual Safety Congress.

11. A hernia into a sac of prenatal origin, or into a slowly acquired sac, is not an accident, because the filling of the pre-formed sac merely leads to the discovering of a previously existing anatomical defect.

12. Hard work develops the muscles of the abdominal walls, so that the well-nourished artisan is less inclined to hernia than the ill-nourished clerk of sedentary habits, though statistics of various occupations in relation to hernia have not been adequately tabulated.

13. The factors which increase the intra-abdominal pressure are: (*a*) Respiratory Diseases—Coughing, etc. (*b*) Gastro-Intestinal Diseases—Enteroptosis, constipation, etc. (*c*) Genito-Urinary Diseases—Stricture, vesical tenesmus, etc. (*d*) Obesity, increased omental, perirenal and subperitoneal fat.

14. Oft-repeated increases in the intra-abdominal pressure, in predisposed individuals, having anatomical defects in the peritoneum, fasciæ, rings, canals or muscles, tend to develop a hernial sac, but the process is slow and gradual; the hernia is often well developed, even scrotal in extent, before the patient knows he has a hernia.

15. An increase or aggravation of an existing hernia is naturally to be expected; hernia should always be treated surgically, unless the operative treatment is in any given case contraindicated.

16. Direct volence may produce true traumatic hernia. Such a hernia is accompanied by intense pains, shock, vomiting, tenderness, swelling, ecchymosis; operation discloses hemorrhage and laceration of tissues, and *no demonstrable hernial sac.*

17. "A true traumatic hernia, if inguinal, is nearly as much of a local injury as if it were produced on the abdomen in other regions."—*Dr. C. H. Mayo.*

18. While the sudden projection of hernial contents into a pre-formed sac may produce distressing symptoms, a surgical operation will disclose the sac; as the sac is (*a*) an embryonal remnant, or (*b*) pouched-out peritoneum, which never arises instantaneously, it becomes evident that a hernia results from anatomical defects.

19. The term traumatic hernia, predicating violence to the physical structure of the body, should therefore be reserved for those exceedingly rare cases of hernia in which direct violence has been applied, and which exhibit evidences of local trauma.

20. Your committee appreciates the courteous cooperation of the surgeons who responded to the questionnaire, and if time permits and space allows, we would recommend the reading and printing of a portion of the replies. By practically unanimous voice, these surgeons classify herniæ as due to anatomical defects rather than trauma.

CHARLES A. LAUFFER, Secretary.

Medical Director, Relief Department, Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

Safety Engineering, November, 1917.

IRIDOTASIS IN SIMPLE OR CHRONIC GLAUCOMA.

FRANK ALLPORT, M. D.
CHICAGO.

No reference will be made in this communication to the pathology of glaucoma—either acute or chronic—except to say that this disease is probably due to lack of drainage, and that any treatment or operation should be aimed at restoration of drainage. Eserin and other drugs do this by contracting the pupil and drawing the periphery of the iris away from Schlemm's canal, hoping thereby to restore drainage. Operations are performed in the hopes of forcibly opening Schlemm's canal, or of producing drainage in some other way. In acute glaucoma the old-fashioned broad iridectomy is perhaps the best procedure, but in chronic or "simple" glaucoma, other operations are, in my opinion, preferable. With the practical exception of iridectomy, all operations for simple glaucoma depend, not primarily on opening Schlemm's canal, but in producing a thin drainage or infiltration bleb capable of well and permanently draining the eye by vicarious means. Elliott's trephine operation has produced many excellent results, but this operation is difficult to properly perform and has a fair proportion of primary and late infections to its discredit. The La Grange operation is much liked by some operators, but is subject to the same objections as the Elliott operation. No operation for glaucoma can be easy and safe, but the procedure that most nearly fills this demand is, in my opinion, the one called "Iridotasis," proposed in 1911 by Johan Borthen of Bergen, Norway, and recently endorsed in this country by Dunbar Roy of Atlanta, Ga., and others. It is performed as follows:

The eye is cleansed and cocainized in the usual manner and a speculum introduced. The patient looks down and a medium-sized triangular flap is made in the upper conjunctiva by forceps and scissors. The flap is undermined to the sclero-corneal junction by both cutting and blunt dissection scissors, but does not extend into the corneal tissue as in Elliott's operation. The flap is held out from the eye-ball (preferably by an assistant), so that it is out of the way of the operator, and also so that he can see his keratome or forceps while in the anterior chamber. A keratome is passed into the anterior chamber,

underneath the flap and just back of the sclero-corneal junction. I use a fairly large keratome (Roy uses a small one), as I wish to have the iris prolapse into the wound if possible, and I like a rather large drainage bleb. Of course, care must be taken not to injure the lens capsule. After carefully and slowly withdrawing the knife, the posterior lip of the wound should be depressed, and, if possible, the iris should be coaxed to prolapse into the wound. This renders it unnecessary to pass forceps into the anterior chamber, thus eliminating a slight danger of infection and trauma, and lessening the danger of hemorrhage and injury to the lens capsule. If the iris will not prolapse, it must be gently withdrawn with forceps. It should be torn as little as possible and should be gently spread, inside out, on the surface of the exposed sclera. It should be gently stroked into position with a spatula. The conjunctival flap should now be carefully replaced in position, over the displaced iris, by forceps and spatula, without a suture, after which bichloride vaseline should be freely smeared over the eye-ball and a bandage applied. The reaction is usually slight and so far I have had universally good results and some of my cases were operated on three years ago. One of these cases is a man, aged 55 years, with perfectly white-cupped nerve heads, with fair fields of vision—a vision of 20/30 and 20/40, and Jäger 2 (with glasses). How he does this I cannot understand, when I look at his nerve heads, but he does. I am always expecting blindness, but so far it has not come.

Of course, my few cases will not prove the superiority of this operation, and I may yet have sufficient cause to abandon it, but so far I desire to commend it and advise others to give it a fair trial.

7 West Madison street.

HE ENJOYED POOR HEALTH.

Dr. D. S. R——, who enjoyed his annual spell of gripp̈e all last week, was able to get down to his office the last of the week and also to get out and attend a few people who were worse off than he was. That's one drawback to being a doctor—the public won't let them enjoy a sick spell in peace.—*Cuba, Ill., Journal.*

A knowledge of medicine is a prerequisite to the practice of the doctor's profession. Yet, if "socialization" continues at its present rate, many will receive scant opportunity to demonstrate that knowledge.

RADIOGRAMS OF THE INJECTED ARTERIAL SYSTEM

J. H. Carpenter, M. D.
Radiographer.
CHICAGO, ILL.

We all know how hard it is to obtain an accurate idea of anatomy from text-book descriptions, especially the position of the various arteries and their relation to each other. Even dissection does not visualize them in their normal position.

It is in the hope of making this study easier and at the same time more thorough, that I present these cuts taken from the actual radiograms of the undisturbed arteries when injected with substances opaque to the x-ray.

A great deal of the cerdit for the success of this work belongs to my co-worker, Prof. A. Worsham, whose assistance has been invaluable.

This is the first instance as far as we know where the entire arterial system of the human body has been injected with a substance opaque to the x-rays and radiographed stereoscopically.

It is hard to conceive the increased value these radiograms show when viewed full size in the stereoscope, as by that method the antero posterior position of these vessels is shown as well as their lateral positions.

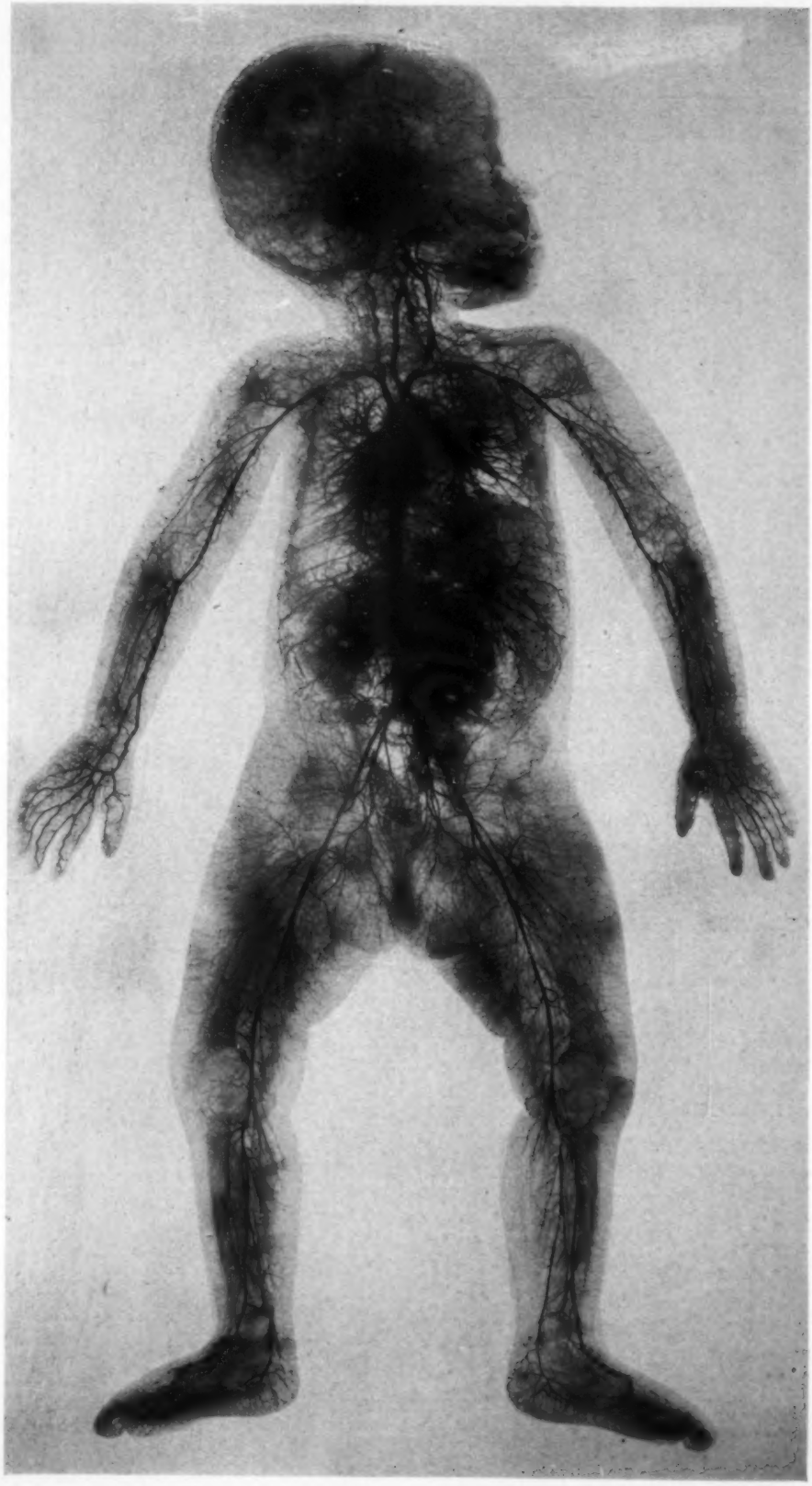
We have stereographed the body as a whole as well as divided into sections to bring out the points of greatest interest. We have also removed, injected and radiographed all of the internal organs in a similar manner. In the case of the hollow viscera as the stomach, appendix, colon and bladder, we have inflated them before taking the radiographs so as to show them in as near their normal position as possible.

In the cut showing the stomach, the pancreas and spleen were left attached to show the common blood supply of these parts. The other small cut shows a portion of the ilium and the cecum with the appendix attached.

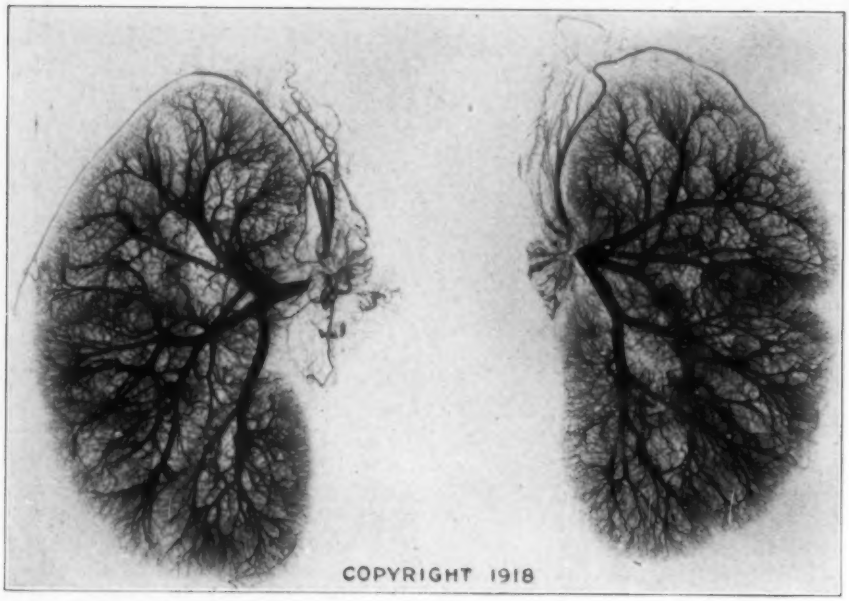
The cut showing the kidneys shows the adrenal in normal position.

It has been necessary in making the cuts of the arm and that of the body to greatly reduce them with a corresponding loss of detail. If these are examined with a reading glass much of this detail will be recovered.

1906 Ogden Avenue.

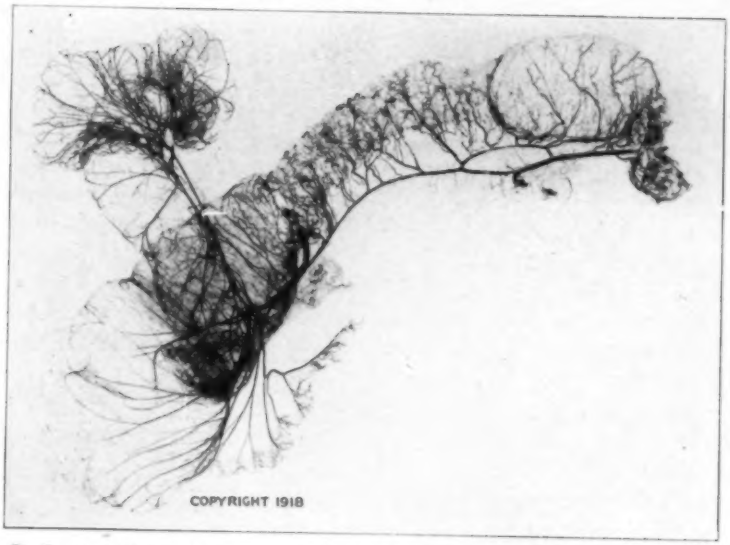


Copyrighted, 1918.
Radiogram of arterial system. Child 3 years old.

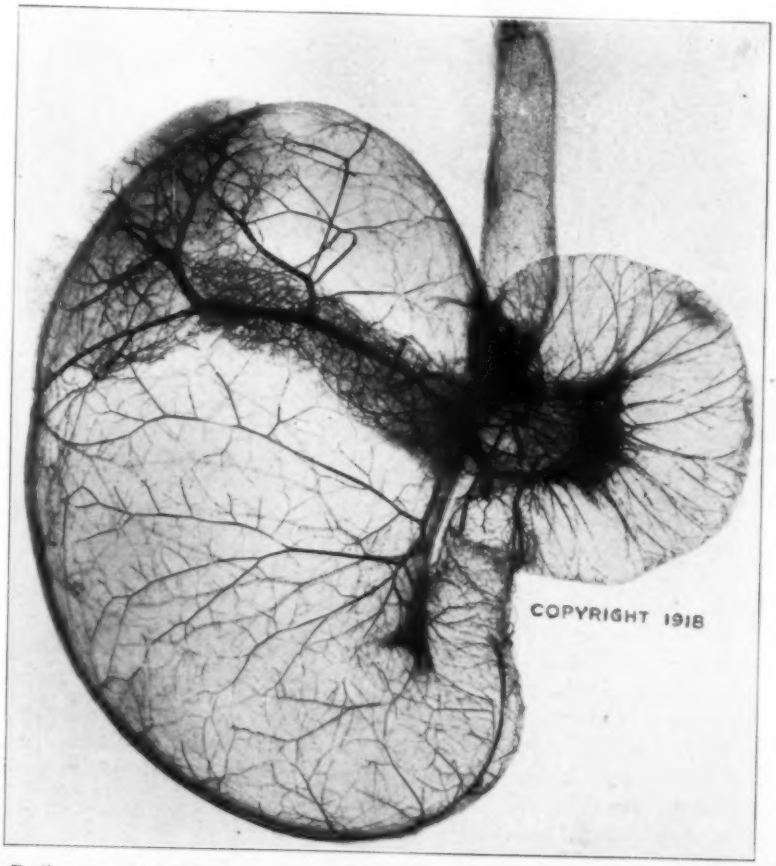


Radiogram of arteries of Kidneys and Adrenals. Child 18 months old.

Radiogram of arteries of Hand and Forearm. Child two years old.



Radiogram of arteries of appendix, showing a section of Illium, Cecum and ascending Colon. Child one year old.



Radiogram of arteries of Stomach, Pancreas and Spleen. Child two years old.

MALIGANT PAPILLOMA OF BLADDER COMPLICATING ENLARGED PROSTATE AND STONE

G. Frank Lydston, M. D.
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CHICAGO.

Stone complicating enlarged prostate frequently is met with. A primary nucleus of varying composition is sometimes found, with a greafer or less number of phosphatic laminae. In such cases there usually is a history of nephritic colic. In a case of the author's a large primary calculus—typic "mulberry" or calcium oxalate—was found behind a fairly large "median lobe." Despite the fact that the stone had been present for several years, and numerous small calculi of a similar nature had from time to time been passed *per urethram*, the bladder was not infected and the urine was clear. No phosphatic laminae, therefore, had formed. There was no history of renal colic. In most instances, calculi complicating enlarged prostate are purely phosphatic, the nucleus varying from pus and mucus to blood clot. "Benign" papilloma complicating enlarged prostate rarely is met with, merely because the bladder condition *per se* usually is a disease of earlier life and causes serious symptoms relatively early.

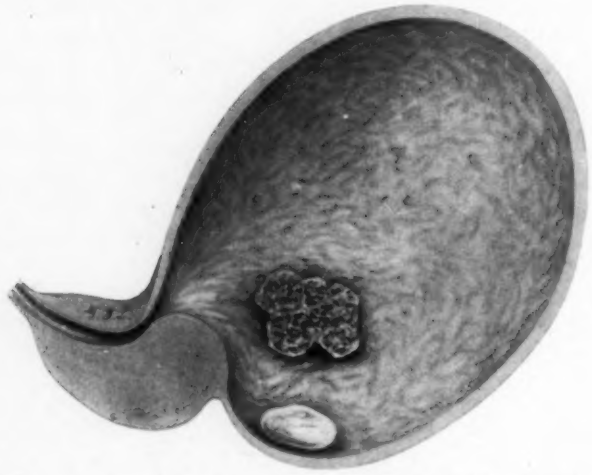

Fig. 1. Malignant Papilloma of Bladder Complicating Enlarged Prostate and Stone.

The following case is a beautiful illustration of the rarer type. Patient, aged 65 years, catheter *habitue*, with the usual history of the *prostatique*, dating back some four or five years, with numerous attacks of retention. As is often the case with prostatic enlargement complicated by stone, painful micturition and pelvic pain were absent. There was a marked cystitis, with six ounces residuum. Slight hematuria had occurred from time to time, but this had been attributed to the prostatic disturbance, which, as so often is the case, had been attributed by the patient and his physician to senility. A large proportion of the profession, unhappily, still believe in "predestination" in prostatic disease. The above illustration beautifully shows the cystoscopic picture. The location of the tumor—remote from the vesical neck—explains why hemorrhage was not a prominent symptom. Suprapubic section was performed and the tumor, prostate and stone removed. Recovery was uneventful. The microscopic examination of the removed specimens showed malignancy. The stone was purely phosphatic. Even though the microscopic report had been negative, the author still would have regarded the growth as malignant. In his opinion, such tumors should be regarded as potentially malignant until some years have elapsed after removal. The patient died two years later from pneumonia, without recurrence of the bladder tumor. 25 E. Washington St.

I do not hate the German crew as fiercely as I ought to do. I know I ought to yip and roar, and kick some panels from the door, whene'er I hear a German name, the symbol of a nation's shame. But it is vain to sit up late indulging in cheap brands of hate; and if I hated, night and day, until a pair of slats gave way, my hating wouldn't help the right, or put a single foe to flight. I'd rather show up good and strong to help the Red Cross cause along, to send a bandage to the lad who lost a wing near Petrograd, to buy the surgeons lint and knives, that they may same some heroes' lives—I'd rather do that sort of thing than hate from now until next spring. I sometimes think I am too meek when friends and neighbors rant and shriek, expressing hatred by the ton for every German and his son. But when I hate for half an hour I feel my stomach turning sour, my form is bathed in clammy sweat, and I must see the village vet. Walt Mason

PSYCHOLOGY AS A FACTOR IN SURGERY.

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The passing years, bringing with it the various epochs in our intellectual advancement for meeting and combating the ills and ails which have afflicted the human race since Pandora's box was first opened, have brought many changes in treatment. Of those of most recent development, an important place has been assigned psycho-therapeusis. It has come to be a well recognized fact that a patient's mental impressions have an important bearing on his progress. The influence of the sub-conscious mind is being recognized more and more in both medicine and surgery. As an evidence of this, we have but to recall the sporadic attempts of various men to control and direct the subliminal impressions. Not so very long ago, music was introduced in one hospital during the anesthetizing of patients. This was frankly an effort to direct into channels, other than the operation, the subliminal mind. If it was for the conscious mind, it was faddism, or worse, pure bunkum; for no one will dispute the assertion that the conscious mind ceases during anesthesia. The method was perhaps spectacular, but nevertheless, laudable, for it marked the beginning of another advancement in science.

Crile of Cleveland was perhaps the first of our profession to publicly recognize the fact that the subconscious mind was still active and a factor to be reckoned with even though the conscious activities were temporarily eradicated, during a general anesthetic. Everyone is now aware of his theory that the subconscious mind is continually receiving battering impulses, transmitted from the operative field by the efferent nerve routes, that tend to exhaust the vitality of the patient. Likewise, you all know of his anoci-association method of combating this factor. His masterly presentation of the subject made us all recognize his contribution to the conservation of life. I do not believe the method entirely practicable in all operations, but there are certain types, particularly extra-abdominal ones, where it is entirely feasible and where entire control of the operative field is in our hands; I mean, for instance, amputations, resections, herniæ, etc.

There are several factors entering into this field which deserve analysis.

1. The mental attitude of the patient toward the surgeon.

2. The attitude of the patient toward the operation.

3. The type and duration of the operation.

With the first of these factors the doctor has little, if anything, to do. The mental attitude of the patient toward himself is, to a great extent, controlled by forces over which he has little influence. It is at least favorable in practically every instance, otherwise that doctor would not be approached. His reception of the patient, personality and method of approach, as well as his manner of handling the case, will strengthen that favorable impression or else, reverse it altogether.

Every case should be so approached and administered that the patient is reassured of his selection. Every individual's cosmos is filled with the ego; each person likes to be flattered as to the perspicacity of their own judgment and every patient is ready and willing to be convinced that they have selected the right man for their particular indisposition. The best evidence of this is the fact, that regardless of the social position or financial resources of the patient, he wants a specialist in his particular ailment. He consults that specialist with preformed subconscious impressions. He may never consciously think of the doctor in the idiom of his ability. He knows he is seeing a specialist and that is sufficient for him. Confidence in the surgeon's ability lessens the pre-operative nervousness that is existent in every surgical case, and which is an important factor in post-operative shock.

2. The average patient approaches a major operation with a certain amount of mental uncertainty. Consciously or subconsciously, there is existent some factor, which for want of a better synonym we will term timidity or apprehension. This apprehension is a variable factor in different individuals, being apparent to a greater degree in some than in others. It is usually directed toward one phase or the other of the operative cycle, generally toward the anesthetic. The patient fears that he will not awaken; and

indeed this timidity is human and natural. Who of us are so smug and self-complacent as not to feel a qualm of misgiving upon resigning ourselves to a journey into oblivion? Who, amongst those assembled this evening, would not question in their own minds the certainty or uncertainty of a return of consciousness? There is truly something horrific and appalling in lapsing into a state of anesthesia during which the very spark of vitality rests in the hands of a person perhaps utterly unknown to us and with no personal interest in us, who may be an indifferent anesthetist, both as to attention and qualifications. It might be an interne, just beginning his service. I have seen internes who seem to believe that ether was a cocktail to be poured into the patient. I have seen them pour ether by the ounce on a mask which was tightly clasped over a patient's face, their attention distracted from their immediate occupation to the operation or to some other object of interest. I, on occasions, and unquestionably many of you also, have been compelled to discontinue operating to revive an over-anesthetized patient. This should not be. All hospitals should have professional anesthetists. I did not intend to give a dissertation upon anesthesia, but these thoughts forced themselves to my mind and I have long looked for an opportunity to give utterance to them.

We should remove all controllable factors of danger and causes of apprehension to a patient in an operation, and anesthesia is one of the causes of prime importance. We all know that there are certain elements of danger in the best anesthetic and likewise we are all reluctant to take one. I was asked recently to go to a dentist with a doctor, who intended having a couple of teeth extracted and planned taking gas. This man is, consciously, not afraid of man, beast or devil. Subconsciously, he dreaded anesthesia. He sought for some assuaging element and thought my presence would supply it and give confidence. He knew that I was greatly attached to him and would be extra-solicitous for his welfare. Even this, however, did not suffice, for after hesitating and then giving consent, just as the mask was placed over his face, he pushed it away and ordered the extraction to be made without anesthesia. If we doctors are victims to this fear, should we ridicule our patients who suffer from it? No. Yet many of us, instead of combating it in a patient who expresses apprehension, laugh at that patient. We must remove that objection and the removal must be through psychological channels, by mental impressions and inspired confidence. We must seek the fundamental reason for the fear and rid the patient of it.

Other patients are reluctant to submit to an operation because of supposed physical conditions and their minds in this phase are frequently directed toward their hearts. Some fear post-operative calamities, lack of strength, etc. These apprehensions can be met and alleviated by a systematic and thorough examination of the physical condition of the patient, thereby impressing the patient that you as the doctor are fully cognizant of any disability that may exist. A patient's mind can be disabused of a wrong belief of anatomical or physiological defects, and belief of any statement can be assured if the patient has been impressed by the method and extent of the examination. Perhaps the most difficult cases to handle are those who have a preconceived idea of death and passively resign themselves to await the end, making no attempt at resistance. This mental attitude is particularly unwelcome in acute conditions and operations for them. Can an individual be so firmly convinced of the approach of death that he really brings death upon himself? That is a question for psychologists to answer and yet we have evidence in literature and history that has passed beyond the state of mythology, that the Kanaki natives of Hawaii believed so firmly in the power of their priests to invoke death upon them, that when any one was the object of the prayer of death they became so impressed with the idea of death or the fear of death, that they died. The explanation of this reaction is probably that of auto hypnosis. Is this same thing true of those patients whom we encounter who passively await death? Or have their subconscious minds had a glimpse through that impenetrable veil of the future which separates the "to be" from the "what is"? I am convinced that most people whose span of life is about to be terminated have a foreknowledge of the approaching event. I have had experiences that strengthen me in that conviction. In those who predict their death, I would think twice before operating. We, all of us, are undesirous of signing death certificates, and I am no exception to the rule. I am offering no suggestions as to

the method of reassuring patients in their preoperative attitude, except to say that it must be through mental channels. The operator must control as far as possible their thoughts, removing fears, gaining confidence and giving assurance of success.

The third division, the type and duration of the operation is absolutely under the surgeon's control. Here, he has a free hand. He should know as near as possible in advance, the limit of the patient's tolerance, the physical condition and the pathological processes. With a full knowledge of the secretory activities, the blood findings, blood pressure and general organic conditions, a fair estimate may be made of the patient's ability to pass through a long or short operation, and the work to be accomplished can be planned accordingly. In view of our knowledge of the continual receipt by the brain-cells of the traumatic impulses from the seat of the operation, we should guard against such impulses and where possible, temporarily remove the conducting nerves. This can be done, as you know, by the infiltration of the field with novocain or cocain, which will produce a temporary paralysis of the sensory nerves. Such action is particularly desirable in old, feeble or weakened patients. In amputations, and flat-field operations, particularly, the entire field can be controlled.

It is less efficacious in abdominal work. We can gain something here, however, by eliminating our puttering and handling. Let us know what we are going to do and do it at once. Clean cutting with scalpel or scissors is less traumatic than dissecting and transmits fewer impulses and weaker ones, to the brain-cells. Shorter operations and speedier work where consistent with the safety and cure of the patient, should be performed. I am purposely omitting reference to the control of hemorrhage, fluid-ratio of the body, etc., in the conservation of the patient's strength because I am directing my remarks particularly toward the psychological forces which, I am convinced, are all too often neglected. And, I am further convinced, that an observance of the few points that I have discussed will tend to eliminate apprehensions, inspire greater confidence, reduce post-operative shock and lead to a quicker and surer recovery.

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THE ROENTGEN DIAGNOSIS OF GASTRIC CANCER.*

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Although the Roentgen method of examination in gastro-intestinal diseases has been in use only a comparatively short time, it has proven itself one of the most important aids in the diagnosis of cancer of the stomach. Its intelligent use in conjunction with other clinical and laboratory methods has rendered early recognition of this disease possible with greater accuracy than heretofore. By showing the size, location and nature of the lesion, it furnishes valuable information relative to prognosis and treatment and frequently renders the exploratory operation unnecessary or shows a therapeutic one to be indicated or contra-indicated.

Its value depends largely upon the skill of the Roentgenologist in properly interpreting the findings disclosed by it. A brief description of the technic employed may help to a proper comprehension of the results obtained. The opaque meal, consisting of a bismuth salt or barium sulphate suspended in a viscid fluid, is, of course, a prime requisite since its shadow accurately protrays the lumen of the stomach and movements of its outline record functional variations of its walls. A combination of both screen and plate examination is to be recommended to get the maximum of information obtainable. If the patient has been markedly constipated it is best to cleanse the bowel by mild catharsis or enemas; violent purgation is contra-indicated as it will stimulate peristalsis unduly and may cause faulty conclusions. The patient should present himself with a fasting stomach. A preliminary fluoroscopic examination of the chest and abdomen should be made as information may occasionally be obtained thereby which is of assistance to interpreting the stomach findings. Thus, an unsuspected pulmonary tuberculosis, heart lesion, or diaphragmatic hernia may be disclosed which may have a definite bearing on the symptoms because of which the patient has been referred for examination. A metastatic involvement of the lungs or liver may be thus disclosed. The appearance of the "Magenblase" may exceptionally give information relative to a

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carcinoma near the cardiac orifice. Rarely even gall or kidney stones may be seen. The opaque meal is watched on the screen as it descends through the esophagus and enters the stomach and note made of any obstruction it may meet on its course. The manner in which the stomach is distended is observed, likewise its size, shape, position, mobility and flexibility of its walls. Peristaltic contractions on both curvatures are closely followed from their inception to their termination and any anomalies or abnormalities noted. The time and manner in which the food passes through the pylorus are especially important. Simultaneous palpation may give information relative to pain points or map out tumors in relation to the stomach shadow. Turning the patient in different angles or examining him in various planes may serve to clear up doubtful findings. After six hours, during which the patient is to abstain from food and drink, a second examination is made to ascertain the presence of gastric residues. At this time it is well to note also the appearance of the meal in the bowel with a view to finding a possible carcinomatosis of the peritoneum. Another examination after 24 hours is advisable to rule out metastatic involvement of the colon. The diagnosis can frequently be made from the screen findings alone, but it is usually advisable to make a number of plates as well to check up and record the conditions seen. At times details will be disclosed on them which may have been overlooked, for plates can show minute changes which even the experienced eye may not detect on the screen.

For Roentgenologic purposes only 2 types of cancer of the stomach need be considered, the fungous or proliferative, and the scirrhous or infiltrative type. In both of these the basis and chief reliance in the Roentgen diagnosis is the filling defect. This is produced by the growth projecting into the lumen of the organ and its appearance varies greatly, depending upon the size, shape and location of the lesion. The one feature it must have to make it of value is constancy or permanency. It may be necessary to examine the patient in different planes to make it visible. Thus defects near the cardia are usually better seen in the horizontal than vertical positions. It may be demonstrable with a small part of the meal and be obliterated by the balance. Pressure may bring it out by thinning the overlying obscuring portion of the meal. Great care is necessary in interpreting defects thus shown, for even the normal compressed stomach shows areas which simulate defects, but these practically always show rugæ. Occasionally the visualization of a defect enables palpation of a tumor mass which had escaped previous examination without this localizing help. With fungous growths the appearance of filling defects resembles that of finger prints in some plastic mass. They may be single or multiple and are usually sharply circumscribed from the surrounding uninvolved parts. The general shape of the stomach may have undergone little change. Filling defects produced by scirrhous carcinomata are commonly less irregular than the other. They shade off gradually into what appear to be uninvolved areas and generally cause marked diminution in the size of the stomach due to contraction. They may be localized or involve the greater part of the stomach. Generally the extent of the process is greater than the defect leads to infer. These growths may extend in annular form around the lumen of the pyloric region leaving only a small irregular canal for the meal to pass through. At times the filling defect may be such that it is impossible to differentiate between the type of tumor causing it.

In conjunction with filling defects, absence of peristaltic contractions in these areas is of marked diagnostic importance. The waves stop as they reach the lesion and may start again on the other side if it is situated some little distance from the pylorus. If there be obstruction at the pylorus, antiperistalsis may occasionally be seen and very rarely hyperperistalsis. Diminished or irregular peristalsis is far more common. In spite of this the cancerous stomach frequently empties itself with unusual rapidity. This may be due to nonclosure of the pylorus caused by its being infiltrated by the growth or by the absence of its sphincteric contraction reflex associated with a co-incident achylia or an acid free secretion. Obstruction at the pylorus is present in over 50 per cent of the cases and is indicated Roentgenographically by retention of a variable part of the opaque meal six or more hours after ingestion.

Less distinctive, but nevertheless valuable signs in confirming the diagnosis of gastric cancer are: Lessened mobility due to possible fixation to ad-

jacent organs, decreased flexibility of the gastric wall preventing free indentation by pressure, spastic incisura opposite the lesion and changes in size, shape, and position. As already mentioned, scirrhous cancer may cause marked shrinkage even to the stage where the stomach resembles a long narrow tube and ingested food backs up in the esophagus and causes it to dilate. Large fungous growths may materially reduce the capacity of the stomach even though causing little change in the size. Exceptionally with pyloric obstruction there is a marked dilatation but usually the process progresses too rapidly to produce this change. When it is present, it is probable that the cancer was engrafted on an old ulcer which had produced the change. The shape may undergo extensive changes as represented by its lumen; cauliflower growths or scirrhous contractions in its fundus may produce an organic hour-glass deformity. Infiltrative involvement of its pyloric end may give it a pear-shape. When it is much shrunken it may be very high in the abdomen, sometimes being completely behind the costal border. A carcinoma near the cardia may cause marked obstruction to the entry of the meal into the stomach and secondarily produce dilatation of the esophagus. In rare instances where there is no actual obstruction, the growth in this area may cause cardiospasm. Tenderness on pressure in itself is of little diagnostic value in gastric cancer, as it may be absent even with extensive involvement.

The above in brief are the main Roentgenologic signs of gastric cancer. Holzknecht, of Vienna, one of the pioneers in gastro-intestinal diagnosis by Roentgen methods, who has furnished many valuable contributions along this line, early formulated a number of postulates or symptom complexes, as he called them, for the diagnosis of cancer. These copied from Potter's Abstract in International Abstract of Surgery are as follows:

SYMPTOM-COMPLEX 1.

1. Bismuth residue after six hours.
2. Normal stomach shadow on the screen.
3. Achylia.

Diagnosis—small carcinoma of the pylorus.

SYMPTOM-COMPLEX 2.

1. No residue after six hours.
2. Marked defect in gastric shadow.
3. Horn-shaped stomach.

Diagnosis—carcinoma. No stenosis. Inoperable.

SYMPTOM-COMPLEX 3.

1. No residue after six hours.
2. Marked defect of the stomach shadow in the pars media or pars pylorica.
3. Horn-shaped stomach.

Diagnosis—carcinoma of the stomach. Operable.

SYMPTOM-COMPLEX 8.

1. Large sickle-shaped residue.
2. Marked defect in the filling of the pars pylorica.

Diagnosis—carcinoma on the base of an old ulcer, with stenosis.

SYMPTOM-COMPLEX 9.

1. No bismuth residue after six hours.
2. Marked defect in the shadow of the pars pylorica or pars media.
3. Transverse constriction of the greater curvature.

Diagnosis—carcinoma on the basis of an old ulcer. No stenosis.

SYMPTOM-COMPLEX 10.

1. Stomach empty after six hours. Head of the bismuth column in the splenic flexure of the colon.
2. Shortening of the stomach.
3. Contraction of the cardia.

Diagnosis—carcinoma of the pars cardiaca.

These with slight modifications are as true now as when issued and form a comprehensive and compact guide, especially for those who have had comparatively little experience.

Regarding the differential diagnosis of gastric cancer from the Roentgenologic standpoint, the findings are usually sufficiently distinctive to rule out other lesions which may produce similar changes. Here as in the primary diagnosis, other clinical and laboratory methods should, of course, be utilized in arriving at conclusions. As far as sarcoma, simple adenoma or myoma are concerned, which are exceedingly rare, these can in no way be differentiated. Their indications for treatment are the same. It has been shown that syphilis of the stomach may likewise cause tumor formation which is indistinguishable from cancer. History, laboratory findings and the therapeutic test may serve to tell them apart. But we must bear in mind that a syphilitic patient is not necessarily immune from cancer and the two diseases may be present co-incidentally. A tuberculous ulcer, though rare, may be difficult to differentiate unless a co-existing pulmonary tuberculosis points to the possibility of its existence.

The principal lesion which is apt to be confused with gastric cancer is gastric ulcer. The chief differential point is that ulcer rarely causes

an organic filling defect encroaching upon the lumen. When it does it invariably means the presence of an old indurated ulcer in regard to which, a quotation from MacCarty of the Mayo clinic is *à propos*. "There is no macroscopic differentiating structural difference between simple chronic gastric ulcer and an early carcinomatous chronic gastric ulcer." If this be true then it is needless to try to distinguish them; it would be wiser to give the patient the benefit of the doubt and treat the case as cancer. Perforating ulcers producing the typical Haudek niche are too characteristic to leave any doubt as to their diagnosis. The hour-glass stomach of ulcer is usually spastic rather than organic in character, although the contraction may be accentuated by scar tissue and adhesions. In shape it resembles the capital B rather than an X and usually has the canalized portion nearer the lesser curvature. The lower sac is usually much dilated in contradistinction to the small lower sac seen with cancer. Hyper-peristalsis is the rule, whereas in cancer it is the exception. Six hour stasis occurs in both but in ulcer it is usually due to pylorospasm. If ulcer produces obstruction at the pylorus there is usually marked dilatation due to the co-existing hyperperistalsis. Pain on pressure is far more common with ulcer than with cancer.

Errors in diagnosis may occur with this method as with any other, especially if the examination is conducted by inexperienced individuals who are not familiar with variations which may occur in the normal stomach or are dependent on sources outside of it. Irregular wall contractions may appear like early scirrhous infiltration. Filling defects may be simulated by pressure from without as, for example, by the spleen, a splenic flexure distended by gas, an enlarged gall-bladder, pancreatic or post mesenteric tumor, or by the spine. Change of position, palpation, observance of peristaltic waves or visualization of rugæ in the area of the defect tend to eliminate most of these factors. Adhesions to adjacent organs are not always easy to rule out as they may cause apparent filling defects, spastic incisura and retention. Palpation must be relied upon to demonstrate their nature. Spastic incisura may be of extragastric origin. Administration of antispasmodics to the limit of physiologic action usually causes them to disappear. Many conditions outside of the stomach may produce variations in size, shape and position of the organ but knowledge of these possibilities and alertness to discover them are usually sufficient to lead to their recognition and prevent faulty interpretation. Thus an enlarged spleen may compress the stomach between itself and the liver; marked scoliosis causes change in position by adaptation to the unusual conditions. A tuberculous peritonitis with plastic adhesions may cause distortions. Involvement of the stomach by extension from a growth in the head of the pancreas or bile passage may at times be impossible of recognition Roentgenologically from primary cancer of the stomach.

As to the earliest time at which gastric cancer can be recognized by the Roentgen ray, it may be said that as soon as the growth or infiltration is of macroscopic size it gives enough Roentgenologic evidence to permit of its discovery in the great majority of cases if a thorough search be made. Often times this occurs before any of the classical clinical symptoms or laboratory findings are present. At times its location is such that its discovery is difficult. Where the Roentgen findings are negative, cancer can usually be ruled out. However, if the clinical findings in such cases are positive or strongly suspicious the examination should be repeated after two to three weeks. It is a fact, however, that most of the cases referred for x-ray examination have progressed far beyond the early stage at which they might have first been diagnosticated. If all patients of a cancer age presenting themselves with digestive disturbances which had no well-defined ascertainable cause and which did not yield readily to appropriate treatment were referred for Roentgen examination the percentage of early cases diagnosed with the aid of the x-ray would undoubtedly be very materially increased. Occasionally the Roentgenologist discovers a so-called "latent cancer"—that is, one which is causing no symptoms—in the course of an examination for an entirely different condition, such as gall-stones or intestinal stasis.

In addition to the confirmatory evidence which the Roentgen examination is capable of furnishing, it provides definite and valuable information relative to the operability or more properly resectability of the growth. It is obviously im-

possible to diagnose metastatic involvement of the lymph glands draining it. Some of these indications have already been mentioned in connection with the "Symptom-Complexes" of Holzknecht. Haudek as well as several other authors, claims that a stomach which retains its hook form is operable. This, however, is not always the case as, for example, in carcinoma of the cardia. Free mobility of the tumor mass usually indicates its operability. Cole in an article in the *New York Medical Journal* of July, 1915, formulated the indications for operation based on the Roentgenologic data in the following manner:

Inoperable cancers are divided into two groups:

1. Those in which the lesion is too extensive to allow even a gastro-enterostomy. This group includes cases with pyloric obstruction but so much additional involvement that not enough normal wall in suitable locations is left to form a satisfactory anastomosis.

2. Those in which gastro-enterostomy is possible but not indicated. In this group fall those cases without pyloric obstruction but so extensive an involvement as to preclude complete removal of the growth. Such patients usually die of constitutional symptoms before the growth obstructs the pylorus.

Operable cancers are also divided into two groups:

1. Those for palliative relief. These include the majority of the cases seen. They show pyloric obstruction with enough involvement to rule out complete removal but not enough to cause death from constitutional symptoms but rather from inanition if surgical intervention is omitted. In these, life can usually be prolonged and the condition rendered more bearable.

2. Those for surgical cure. These include cases which are carcinomatous beyond reasonable doubt as well as those of indurated ulcer which may or may not be malignant. They are usually small and freely movable.

To recapitulate:

1. The Roentgen Examination in carcinoma gives definite and distinctive findings.

2. In conjunction with clinical and laboratory findings it permits of earlier diagnosis than is possible without such examination.

3. Practically all patients of cancer age with stomach symptoms of doubtful origin should be given the benefit of such an examination.

4. Negative findings practically rule out the presence of gastric cancer.

5. The findings are of value in determining the operability.

ANAL FISSURE—ITS RADICAL CURE UNDER LOCAL ANESTHESIA

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Of all the distressing lesions of the human body there is none the suffering from which approaches in any degree that from so apparently slight a pathology as a fissure of the anus, the pain of which is so agonizing that it will break down the fortitude of the most stolid. If seen early these abrasions readily yield to treatment, but usually by the time the patient presents himself to the physician inflammation and infection have occurred and surgery is our only choice.

A fissure occurs more frequently in the posterior quadrant of the anus near the posterior commissure, or occasionally in women in the anterior quadrant, but rarely upon the lateral walls. There is a depression of soft connective tissue in the posterior rectal wall between the external and internal sphincters, and fissures developing here are boat shaped in form, the lower margin being the so-called sentinel pile or it may sometimes be more distinctly seen as a ruptured crypt of Morgagni or an enlarged anal papilla. This tear in the mucous membrane is not always at the anus, but may be found anywhere from the muco-cutaneous junction to the upper limit of the columns of Morgagni; the majority begin at the upper limit of the anal canal, at the lower border of the internal sphincter, and extend downward. Infection readily takes place in the abraded surfaces and sinuses burrow up or down beneath the healthy structures or lymphatics, carry the infection into the triangular space behind the anus, or perhaps the ischio-rectal space and an abscess or fistula may result.

Pathology: The anal fissure is an elongated rent in the mucosa and is limited to a sulcus between two radical folds of the anal wall. It spreads up and down by the action of the feces against the membrane, but not laterally. If the mucosa were spread out the ulcer would prove to be somewhat circular in outline. The abrasion or tear which at first is superficial soon becomes an ulcer by infection. The edges are thickened by inflammation of the surrounding mucosa and undermined by the constant mus-

cular spasm at the base of the wound. The whole depressed surface of the ulcer is at first bright red and bleeds easily when touched. Later fatty, grayish granulations, mucus, pus and pseudo-membrane cover the surface. At this time the edges are pale, indurated and distinctly undermined, with sinuses leading into the surrounding tissues. The whole ulcer and surrounding mucosa are distinctly congested and the underlying muscular wall, which has been laid bare, is spasmodically contracted. At the lower end of the fissure the mucous membrane or muco-cutaneous border is frequently hypertrophied, resembling a pile, the so-called sentinel pile, (fig. 1)

Fig. 1. Anal Fissure showing Sentinel Pile.

Fig. 2. Anal Fissure in the Posterior Commissure showing thickened edges.

which is sometimes divided into two parts by the fissure. It is excruciatingly painful to the touch, and if manipulated brings on the characteristic pains. Cicatrization and apparent healing are always going on, but repeatedly breaking down again. The ulcer may perhaps heal over temporarily, but will soon be torn open by hard fecal masses or straining at stool. Such conditions alter vascular and nerve supply of the parts. A thoroughly inflamed fissure closely resembles a chancre and may be difficult to differentiate. The local history and the absence of other syphilitic symptoms are determining factors.

Surgical Treatment: Divulsion of the sphincter is a bygone method of treatment which although it did relieve and often cured the fissure was so unnecessarily brutal, produced undue traumatism and sometimes left permanent injury to the sphincter whereby the patient had no sense of control of gas or liquid material, and in some cases even lost full control over ordinary fecal matter. In some cases, particularly fissure in the posterior median commissure, it did not cure.

The technic I shall describe, consisting of incision with drainage, always produces satisfactory results and unless the patient is very nervous or hysterical the operation may be performed under local anesthesia.

Technic: The peri-anal skin and the sphincter muscle must be carefully and completely anesthetized. 0.125 per cent eucaine lactate or 0.5 per cent apothesine may be used for the cutaneous infiltration. I use the latter. The patient is placed in the proctologic or the exaggerated lithotomy position as best suits the conditions. The skin in the posterior raphe one inch back from the anus where it is less sensitive is touched with phenol on a swab and after waiting a few minutes the skin is picked up between the thumb and forefinger of the left hand and the needle introduced at the cauterized spot. A few drops of the apothesine solution injected here causes a wheal to arise and after waiting a few moments the needle is advanced and another wheal made while the needle is carried forward just under the skin at a distance of one-half inch from the anal opening. When the needle has been advanced its full length on one side it is retracted to the posterior commissure, but not withdrawn from the skin and

the infiltration carried up on the other side of the anus. When the full depth of the needle has been reached on both sides of the anus it is withdrawn and inserted at the most anterior wheal just made and the infiltration continued to the anterior commissure and around on the opposite side until the wheals meet those previously produced. In this way the whole anal opening is anesthetized while the needle is always kept one-half inch out from the edge of the mucous membrane. This procedure blocks the inferior sphincter nerves. When the cutaneous infiltration reaches the anal fissure the needle is carried down beneath the base of the ulcer and its surroundings including the sentinel pile are well filled. It is sometimes necessary at this time to place a cotton pledget wet with 2 per cent. apothesine into the fissure. Wait ten minutes for anesthesia to be complete and then carefully introduce the left index finger into the rectum above the external sphincter, hook the finger over the muscle and by slight traction draw it down and steady it while a long needle (at least 2.5 inches long) is passed through the skin at the anesthetized bullae into the sphincter muscles and 10 mimims of 0.5 per cent. quinine and urea solution is deposited in the substance of the muscle. This deep injection is made on either side of the region of the fissure and in one or two distant parts of the sphincter. After waiting 10 minutes to insure complete analgesia the fissure is dissected out in such a way that a "V" shaped wound results which is twice as deep at the lower skin end as at the upper extremity within the anal canal. The base of the fissure is removed deep enough to expose the muscle wall and the outer end of the wound extends well out onto the skin to facilitate drainage.

The sentinel pile, if present, is carefully included in the parts cut away, and also any papilla or small polypoid growths at the upper end of the fissure, which might fall into the rent and hold the wound apart. Sinuses burrowing under the mucous membrane are sought with a probe, and when they are found should be widely opened.

The whole wound is now well annointed with heavy vaseline and the wound packed with paraffined gauze laid in narrow layers. A light anal dressing fastened with adhesive strips concludes the dressings.

In 24 hours the gauze packing is removed and its removal is painless, quite a contrast to a dry gauze packing which becomes filled with granulations and blood clots. As the gauze is removed the wound is flushed well with saline solution or sterile water and these flushings are repeated once each day and also following each bowel movement, until the field is completely healed, which requires about three weeks. During these dressings the edges must be carefully separated by the attendant pulling the buttock apart. The whole wound is exposed and regeneration develops from its base. Particular attention must be given the upper limit of the wound and also the lower skin outlet that perfect drainage may be provided. It is advisable although not necessary, that the patient keep his bed for a day or two after the operation. No effort is made to confine the bowels, but the evacuations should be kept free and the movements soft, and after each defecation the patient should take a warm antiseptic sitz bath.

30 North Michigan Avenue.

THE OPERATIVE TREATMENT OF TUBERCULOSIS OF THE SMALL BONES.

CHARLES M. JACOBS, M. D.

Associate Professor of Clinical Orthopedic Surgery, University of Illinois College of Medicine; Attending Orthopedic Surgeon Cook County Hospital and Home for Destitute Crippled Children.

CHICAGO.

Someone rightfully has said that every new suggestion in surgery and every discovery in medicine moves through certain phases of reaction with the profession and eventually may become a new standardized procedure. To this I would add that not infrequently measures cling to us by inheritance and custom, and we are often loth to depart from them to adopt newer procedures, the value of which we fail to early appreciate or comprehend.

That surgery should precede or supplement the older and conservative methods of treatment in tuberculous bone and joint disease is not unreasonable. Surgical methods, however, could not contribute to the cure of tuberculosis of the large joints without involving a great sacrifice of bone and a crippling deformity, hence the orthopedic surgeon, apparently satisfied with the arrest of the disease in three or four years, generally with-

out deformity, usually has preferred to cling to conservative methods. In certain adult cases, however, radical operation has been recommended in tuberculous bone disease, but in children it has been thought that better results were obtained by conservative treatment.

An experience occurring to the writer about three and a half years ago in the case of a child with tuberculous ankle disease, the details of which will be given later, furnished the incentive for renewed interest in the operative treatment of tuberculosis of the small bones. Since then my series of cases has comprised a sufficient number to warrant a definite opinion which leads me to emphasize the practicability of surgical measures which will shorten the long period of treatment necessitated by conservative methods.

This brings us to the question: Can operative procedure for tuberculous disease of the small bones, as in the ankle, foot and wrist, shorten the period of treatment and at the same time secure as good an ultimate result as that obtained by conservative methods?

The length of time consumed by conservative treatment in tuberculous ankle or wrist joint disease is never under one and one-half years, seldom under two years and generally is three or more years. Because of the arrangement of the structures involved, there is a marked tendency for the tuberculous disease to extend from one bone to another until, especially in adults, the entire foot or hand is involved. A frequent effect of the disease is suppuration. Mixed infection may riddle the entire foot or wrist with septic sinuses. Pulmonary phthisis is a common complication. In children, however, the outlook is not so bad as in adults, this being due probably to the greater power of resistance and repair shown in the tissues affected. With this in mind I always had opposed operative procedure until the result obtained in the following case threw new light upon surgical interference.

A little girl, aged four, was brought to me for operation for a "swelling" of 10 weeks' duration in the right ankle, which came on insidiously, accompanied with little pain. Examination showed a poorly developed little girl; on the inner aspect of her right ankle was a small fluctuating mass, the skin over which was tense but not red, and only slightly painful on pressure. The foot was in position of talipes valgus and motion was restricted only in adduction. The afternoon temperature was 100°. Roentgenograms showed some destruction of the astragalus. *Diagnosis*: Tuberculosis of the astragalus. Conservative treatment was repeatedly advised and each time refused by the mother. Finally I performed an astragalectomy and applied a plaster cast. The postoperative treatment was without incident. Orthopedic after care was continued for about 6 months, *i. e.*, until there was no longer any afternoon rise of temperature.

It is a common observation that at least seventy-five per cent. of cases of tuberculous joint disease run a persistent afternoon rise of temperature which varies from 99.4 to 100. Patients should not be discharged as cured as long as there remains any abnormal rise of temperature.

The ultimate result in this case was a cure within six months, with a leg presenting one-half-inch shortening and with the foot, when weight-bearing, in a position of slight varus.

Encouraged by the course the above case was running, I did not hesitate to operate on a girl aged twelve, with the following history:

About eight months previously she complained of discomfort and pain in the right ankle which became swollen and four months later developed a discharging sinus on the outer side of the heel. Examination revealed much swelling of the entire right ankle and foot, more marked below the external malleolus. The skin on the outer side was red and there was a discharging sinus She complained of some tenderness on pressure though movement at the ankle joint was not painful. There was some afternoon rise of temperature. Roentgenogram showed an area of necrosis on the anterior and the outer side of the os calcis. About ten days later the inner side of the ankle became very painful, fluctuation could be detected and later the abscess opened spontaneously.

As the focus of the disease was located in the outer and anterior side of the os calcis, operation was planned to reach the deposit by an external incision. The diseased area was chiseled out—a gauze drain inserted and a plaster cast applied. Increased suppuration occurred which subsided in four months. Casts were used for a period of eight months.

The ultimate result was a cure in eight months without shortening.

A third illustrative case is that of Maggie P., aged seventeen, who entered my service at Cook County Hospital complaining of pain in the right wrist, which commenced three months previously and had gradually become more severe. Examination showed an enlarged wrist, the bony outlines of which were obscured. The swelling involved one-third of the forearm and the hand to about the base of the fingers; tenderness on pressure was most marked over the carpal bones and motion at the wrist joint was painful. Roentgenogram showed characteristic shadows of tuberculous osteo-arthritis; there was marked evidence of absorption of the carpal bones. The

process seemed to extend along the radius and ulna and marked erosions were present; the bones distal to the area were very markedly deficient in calcium salts. Two weeks later there was a discharging sinus on the radial and flexor surface of the forearm and eight days later a second discharging sinus on the ulnar side of the forearm.

The surgical procedure consisted of the removal of all the carpal bones. A plaster cast was applied with a fenestrum through which the wound was dressed,—there being much purulent discharge. The sinuses healed in about eight months. Orthopedic after treatment was given for one year. The ultimate result was a cure in one year with impaired function.

A fourth illustrative case is Ida B., aged three. About four months previously the dorsum of the left foot was first noticed to be slightly swollen which condition gradually disappeared. A short time later the swelling reappeared and was painful on pressure and on walking. Examination showed the swelling on the dorsum of the foot to be a small fluctuating mass—a cold abscess. Motion at the ankle joint was free. The afternoon rise of temperature was to 99.6. Von Pirquet test was positive. Roentgenogram showed destruction of the internal cuneiform and head of the second metatarsal bone. September 30, 1916, operation was performed. A cold abscess was found beneath the skin. The internal cuneiform was removed and a portion of the second metatarsal chiseled away. A gauze drain was inserted and the foot and leg placed in a posterior plaster splint. Suppuration occurred and continued up to three weeks ago. Cure is almost complete in a period of eight months.

In no disease is surgery more justified than in tuberculous disease of the small bones of the ankle, foot and wrist, other views to the contrary, notwithstanding. It should be undertaken at the earliest possible time in adults because of the greater liability of the bones to suppurate and the frequent complication of pulmonary tuberculosis. It takes courage, however, to advise operation in children in the beginning of tuberculous joint disease where there is a great probability of a cure by conservative methods. Conversely the results obtained by conservative methods in adults are so poor in most cases that amputation offers the only chance to save life.

Disease of the astragalus usually necessitates astragalectomy and, at times, resection of the joint. In disease of the os calcis, operative treatment consists of the removal of the foci by chiseling. In disease of the tarsal bones, if the process is not extensive, resection of the involved bone may check the disease. Involvement of a metatarsal bone calls for its removal. Tuberculous disease limited to a single bone of the carpus or metacarpus must be treated by operative removal of the diseased bone, except in children, in whom conservative methods should first be tried; but if several of the carpal bones are diseased, whether in adults or children, then all of the carpals must be removed.

Suppuration in tuberculous disease of the small bones, whether in the form of a "cold" abscess or a discharging sinus, is a positive indication for operation. But operation necessarily will increase suppuration because it disseminates the infection in the normal, highly vascular and cellular spaces surrounding the seat of infection; with free drainage, however, suppuration gradually subsides.

Amputation is indicated in certain cases—(1) when the septic processes have brought about destruction of the structures, and (2) where there is no longer any possibility of curing the diseased bones and saving a useful foot or hand.

Let me emphasize the fact that if resection is performed before several joint surfaces are involved, resection then will eradicate the diseased area and shorten the period of cure. Unfortunately, however, surgical procedure usually is delayed until amputation is imperative and by that time there generally is some lung involvement. Many a foot and many a hand have needlessly been sacrificed, to say nothing of the lives that have been lost because of the failure to adopt early operative procedure.

31 North State Street.

REPORT OF THREE CASES OF APPENDICITIS COMPLICATED BY PREGNANCY.

LEONARD P. DAWES, M. D.,
JUNEAU, ALASKA.

After reading Professor Heineck's article in the April number of the ILLINOIS MEDICAL JOURNAL in which he reviewed the reported cases of appendicitis complicating pregnancy in the French, English and German literature for the years 1900 to 1915 inclusive, in which time 172 cases only are reported, I submit the following case reports, and trust you will find space in your JOURNAL for same.

Case 1. Mrs. J. S., aged 20 years, primipara, came to me May 24, 1916, suffering great pain in the lower right side of the abdomen. There was a history of chill at the beginning of the attack. She had

menstruated last about April 20 and considered herself pregnant.

She gave a history of three previous attacks which were similar to the present, before marriage, and surgeons had advised the removal of the appendix. Operation wa sadvised and done, the appendix being found retro-cecal and buried in dense old adhesions. There was an active inflammation of the appendix and it was removed with considerable difficulty.

Labor pains developed several times during the first few days which were controlled with morphin. These pains subsided gradually and entirely by the end of the week and she went to full term and gave birth to a healthy child in December.

Case 2. Mrs. L. J. I., aged 20 years, primipara, consulted me December 16, 1916. She had missed one menstruation and thought she was pregnant. She has had two similar attacks with diagnosis of appendicitis previous to this. This attack started with chill, nausea and vomiting and pain in the right side. Tenderness was marked and there was rigidity of the muscles of the right side. Operation was advised and done. The appendix was large, not adherent, and contained a large concretion and there were several small ulcers on the mucosa. She made a good recovery and was sent home in about three weeks. Her progress was favorable until the end of the seventh month when pernicious vomiting set in and continued for three weeks when she again returned to me for treatment. At this time she was secreting 13 ounces of urine in twenty-four hours which contained considerable albumin. Under treatment the quantity was increased to 30 ounces per 24 hours but the albumin and vomiting persisted. After one week of this treatment and observation, the patient in the meantime becoming weaker, it was decided to empty the uterus. She was etherized and a rapid dilatation done and a living child delivered, the mother making a good recovery, and has continued healthy to date.

Case 3. Mrs. W. P. L., aged 30 years, multipara. Present trouble began at 2 a. m., October 19, 1916, with chill, intense diffuse abdominal pain, nausea and vomiting and profuse perspiration, the pain rapidly becoming localized in the right side, and by 9 a. m, a mass could be palpated. The temperature was subnormal at first, going to 101 F. by 9 a. m. Pulse 100 per minute. She was pregnant about three months.

Operation was advised and done the same morning. The appendix was surrounded by adherent omentum and there was present considerable serofibrinous exudate. The appendix was large, soft and appeared bordering on gangrene. This patient made a good recovery and went to full term with normal delivery.

WILLIAM THE KAISER.

William the kaiser (may his tribe decrease!)
Woke in the dark from some nightmare of peace,
And saw, within the dim light of his room,
Making it lurid as a hell in gloom.
A devil, writing in a book of brass—
A love of war had made the kaiser crass!
And to the devil in the room he said:
"What writest thou?" The demon raised his head.
And with a look made all of rank discord
Answered: "The names of those who hate the Lord!"
"And is mine one?" said William. "Nay, not so!"
Replied the devil. William spoke more low,
But cheerily still, and said: "I pray thee, then,
Write me as one who hates his fellow men."
The devil wrote—and vanished! The next night
He came again, with a great wakening light,
And showed the names whom hate of God had curst—
And lo! the kaiser's name was printed FIRST!

—J. S. Gray, *New York Herald.*

THE REAL MEANING OF THRIFT.

Just now the word thrift is heard on every hand. A great program of thrift has been instituted by the Government at Washington. Thrift is being preached everywhere—in pulpit and press, in clubs and other meeting places, shouted abroad in the streets. The very letter that comes to you in the morning mail bears a legend to the effect that food will win the war and that all must economize. What is the meaning of this thrift?

For many years students of political economy, of whom Adam Smith and John Stewart Mill perhaps are best known to the American people, have written of thrift and its effect upon the political and social body. Thrift does not mean hoarding. It does not mean saving and sparing, alone. It does not mean penuriousness and niggardliness. Thrift means a wise withdrawal of capital from unproductive uses and its diversion into channels of productivity. In other words, it is not thrift to save a dollar and secrete it in a teapot or an old sock. Thrift means saving the dollar and putting it to work by investing it in some project where it will yield safe and wholesome returns.

The United States is at present engaged in the tremendous task of organizing an army and a navy, transporting men 3,000 miles to a battle front, providing these men with food and guns and ammunition and helping feed our allies in the task of defeating the most sinister and malignant military force that ever sprang at the throat of civilization. Those chosen to direct this tremendous enterprise, the Government at Washington, need *your* dollar, and the Government is willing to pay a liberal rate of interest for the use of it.

Real thrift may be exercised by diverting money to the Government's use in these critical times when thrift contributes so strongly to ultimate success. If the Government's promise to pay back at a liberal rate of interest is not good, neither is the money of the land worth anything. The Government, of which every man, woman and child of the land is a part, will use the money to thwart the unholy purposes of a hostile, conscienceless power that hid behind a veil of nauseous intrigue and plotted the conquest of the world by force of arms. Thrift on the part of the great American nation will pave the way to a universal understanding which will mean that Peace shall reign in the world without danger of attack from the forces that would supplant it with the Right of Might.

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FEBRUARY, 1918

Editorials

Go *back* to the *simple* life, be contented with *simple* food, *simple* pleasures, *simple* clothes. Work hard, pray hard, play hard. Work, eat, recreate and sleep. Do it all courageously.

We have a victory to win.

—HOOVER.

RANKING OF MEDICAL MEN IN THE ARMY

There is a bill before the Senate and the House of Representatives known as the Owen-Dyer bill. Its object is to distribute the medical staff of the Army, including the officers of the National Guard and the Medical Reserve Corps, in grades in the same ratio as obtains in the Navy. It also includes provisions for an increase in rank of officers in the Medical Reserve Corps equal to that of the regular Army medical officers. Every physician, as well as the relatives of every soldier in the Army, should work for the passage of this bill.

It is common knowledge that the regular Army officer has no respect for the Medical Department. This is because of the very low rank of the medical officer. Rank is everything in the Army, regardless of who says it is not. We again refer to the report that early in the war an effort was made in the English Parliament to prevent American doctors from serving in hospital units where English soldiers were treated, and this because of the inferior ranking (Army) of the American doctor.

The lack of authority of medical officers and the colossal ignorance of a line officer were responsible for several hundred deaths at Chickamauga and this after being advised and warned by the Medical Department.

The opinion of civilian medical men is sought by the Government on many questions of sanitation, and is followed so long as the medical man is not in the Army, but place on him the uniform of the United States Army (Medical Reserve Corps), and the highest opinion he may have is ranked as the opinion of a major, with about as much influence or authority as the proverbial snow ball.

Fortunately there is not as great ignorance, we believe, in the line officers of the Army now as there was in 1898, nor as great arrogance or egotism, but, nevertheless, the Medical Department of the Army should have requisite authority (and knowledge) to prevent other such blunders as occurred during the Civil and the Spanish-American wars. The sanitation blunders of the war of 1898 were proportionately as great as those of the Civil war, in fact showed greater stupidity, and most of those of 1898 were because the Medical Department was snubbed continuously.

This is not a question of a few more dollars. It is a question of saving the lives of these good American men now serving the country. We urge all of our readers to write their senator or congressman, and request their aid in the passage of the Owen-Dyer bill, as this will be one step toward creating respect and recognition of the Medical Department of the United States Army.

FAILED TO GIVE CREDIT

Through an error of the Editor, credit was not given for original publication in the *American Journal of Diseases of Children* of the article by Dr. J. H. Hess on, "The Diagnosis of the Age of

the Fetus by the Use of Roentgenograms," which was published in the February number of the ILLINOIS MEDICAL JOURNAL. Credit should have been given to the *American Journal of Diseases of Children.*

HOSPITAL STANDARDIZATION

A consideration of this subject must take into account two fundamental questions. First: Shall the hospitals of the country be regulated and standardized? Second: By *whom* shall the hospitals be standardized? Assuming that only an affirmative answer can be given to the first question, the second question becomes important.

Present developments suggest two solutions for this question, as two medical organizations are already in the field. Namely the American College of Surgeons and the American Medical Association.

The motives of the American College of Surgeons in attempting to impose its regulations upon hospitals will be challenged by practically everyone possessed of sufficient penetration to see beyond the high sounding phrases which the "College" hides behind while it confesses its sacred mission.

The history of this organization from its beginning is that of a colossal effort to corner the surgery of the country.

The aims of this "College" which boasts four thousand members who pay in dues one hundred thousand dollars annually, are set forth in its much vaunted "Fellowship Pledge."

In a column five inches long this "Pledge" measures up approximately as follows: Introductory and pledge of loyalty to the "College" one inch. High sounding generalization—one and one-half inches. Concerning the surgeons fee—two and one-half inches. An x-ray measurement of the "Pledge" shows the *fee part* to be about four and seven-eighths of the five-inch total.

When the dragnet for members in this ambitious enterprise was first cast, the candidates for fame were led to soliloquize about as follows: "Here is a chance to show to all interested parties who the real surgeon in this community is. This recognition of real ability has been delayed altogether too long, but at last here is name and fame at a single bound—just look at that second inch and a half of the fellowship pledge. An appropriate academic robe with a five-inch scarlet velvet facing, together with a row of letters after one's name will certainly bring in operations, besides making the undecorated outsider look cheap, which of course is what he deserves. To be sure, there will have to be a few well paid men around the top, for instance a secretary-general at ten thousand dollars a year, but a thing of this kind won't last without a good "business agent," besides, the increased number of operations will more than take care of all expenses."

However well membership in the American College of Surgeons has succeeded as a "business getter," evidently the management believes that its members can easily take care of a few more patients, for the questionnaire sent to hospitals does not get very far before the all important surgeon's fee bobs up once more—the inference being that the last two and one-half inches of the fellowship pledge will smooth out most of the hospital difficulties and incidentally that only members of the "College" should be recognized as qualified for membership of the hospital staff.

It is illogical that one group of specialists, whatever its pretensions, should be permitted to undertake the solution of the hospital problem and most certainly should this important duty not be delegated to an organization that from its inception to the present time has sought to cast discredit upon the rank and file of the whole medical profession.

The only logical organization to assume the responsibility of hospital standardization is the American Medical Association, representing as it does every form of reputable special and general practice. Its results in handling the problem of medical education is sufficient guarantee that its work of hospital standardization will be brought to a satisfactory conclusion.

NORTH SHORE PATRIOTIC DINNER

The North Shore Branch of the Chicago Medical Society on the evening of February 16th, did honor to the medical men of the North Shore now in the service, by presenting them a service flag. Dr. Frank Morton was responsible for the patriotic dinner that was given, at which time the flag was presented and was accepted in the name of the Army by Colonel H. J. Raymond.

The enthusiasm of the project may best be estimated by the fact that almost eight hundred

people sat down to dinner, and after dinner remained until a late hour that they might hear an address given by a master orator and a true patriot.

The toastmaster, Dr. Chas. J. Whalen, introduced the speakers, among whom were Drs. C. E. Humiston, J. V. Fowler, W. A. Pusey, J. F. Biehn, W. E. Post, Judge W. M. McEwen, Colonel Raymond and Bishop Anderson. The remarks of the speakers were brief, but showed plainly the loyalty of the medical profession and the spirit with which it will serve the nation in its every crisis.

One must note the tone of sincerity in the speech of acceptance delivered by Colonel Raymond. It marks more plainly the amalgamation of the civilian medical fraternity with that of the military organization.

Dr. Pusey in his speech touched on a phase of the doctors' service that has not been brought much to light. He notes the extraordinary sacrifice required of most of the medical men,—a sacrifice that is peculiar to the medical profession,—but in this sacrifice he does not sympathize with but envies those men who are giving service.

Those who were unable to attend and hear the address of Bishop Anderson missed hearing an oration comparable with any of those noted ones emanating from high sources. It is to be regretted that this address could not have been heard by every American citizen. It dealt not only with patriotism but with Americanism.

After Dr. Biehn, President of the Branch, presented the flag and Colonel Raymond accepted it, little Miss Dorothy Morton and Donald Whalen each drew back a large American flag uncovering the flag of honor. A flash light was taken which we reproduce.

The North Shore Branch has honored itself in honoring the men in the service, and we congratulate the officers of that Society for the success of the affair.

ADDRESS AT DEDICATION OF SERVICE FLAG.

WM. ALLEN PUSEY, M. D.
President-elect Chicago Medical Society.
CHICAGO.

I am glad to take part in this event. I like to see the bright lights and to hear the band play. I like to see good humored people eating a good dinner, and enjoying light conversation and speeches—which put no tax on the mind. I can even enjoy such an occasion with men alone. But when we have the ladies; when the ladies add their gracious presence to such an occasion; when to the drab pleasure of a man's party we add the briliant joy that the ladies furnish, then to my mind we have a real party! Like Sidney Smith about the strawberry, I feel that doubtless the Lord might have made a better occasion, but doubtless also he never did. As my old grandfather once said to me: If I were worth a million dollars and liked to travel, I wouldn't move six inches.

Seriously I hold myself fortunate that as an officer of the Chicago Medical Society, I have the opportunity to take active part in this tribute to our soldier colleagues. The occasion is an event in the history of the Chicago Medical Society and an honor to the North Shore Branch.

I have an admiration that is, perhaps, extravagant for the part of the medical profession that has given itself to the war. It is an honor to the profession of the United States. Over 16,000 doctors have accepted commissions in the Medical Reserve Corps; that means that one in every five of the doctors that are worth counting are already in the service of the country. And I believe I am in position to know that as many more will volunteer as they are required. The showing already is a magnificent showing—the country with all of its fine effort has nothing better.

And as I am proud of the showing of the profession as a whole, I am full of admiration for the individuals who have gone in. They have the real spirit. They are the kind that when it comes to themselves, are not always considering Safety First. They are not those who have always in mind the damage that may occur to their own miserable little hides. They are not willing to compromise about the essential matters of life, or to accept the comforts of peace obtained by other men's efforts.

The men in the medical corps have shown that they have courage. They are not afraid to cut loose from their easy moorings and start on a voyage they know not where, so long as there is a demand that they should do it.

They are ready to dare; and they are ready to make sacrifices. They have shown themselves ready to make every sacrifice. To give up the comforts of home, and to do the hardest thing—to have their families make sacrifices. And their wives, God bless them—have shown the same readiness.

Dr. Franklin Martin last Wednesday night laid particular emphasis on the patriotism of "the dollar a year man." I have no disposition to belittle him. I admire him and give him all praise—not because he is a dollar-a-year man, but because he is a patriot. But the first thing that being a "dollar a year man" shows beyond doubt is that he is not dependent upon his labor for his income. The medical profession would be relieved of many difficulties if it could only be dollar-a-year men. In a very real sense the doctors who have gone into this war are more than dollar-a-year men; for they have had behind them no incomes independent of their labors and they have sacrificed their profes-

Colonel Raymond Accepting the Service Flag.

sional incomes that their families cannot forego without hardship.

The younger men have gone; and in doing so have given up the beginning independence that is following years of effort and privation. I believe when they come back they can start about where they left off, but they do not think so.

The older men have gone; and have given up for a meager salary ample incomes that they need for their families.

It's all magnificent. I repeat I have only respect for the rich man who goes in for nothing; but I wish to emphasize the point that no less of "a dollar a year man" than Julius Rosenwald made to me, that the man who is making the great sacrifice is he who must have the small salary the government gives him in order to support in a meager way his family that has been used to better.

In the face of the greater sacrifices that war demands of us, I would not over-emphasize the material sacrifices our men make, but I would call attention to the fact that to the great number of doctors who have gone in, the material sacrifice for their families is a big thing.

But if I appreciate the spirit and the sacrifice of the man who has gone to war, I do not offer him sympathy. I envy him. He and his have the immeasurable recompense of pride in duty well done. He is doing his part in great affairs. He has the satisfaction of knowing that he has risen to the full measure of the best that could be asked of him. He is pursuing a course in the great crisis that will always be the most treasured memory of himself and his family. He is increasing his own self-respect, and he has the respect and gratitude and admiration of his fellows.

Every time I see a service flag in a window I feel like raising my hat. And, thank God, we are seeing these emblems of pride and affection and patriotism everywhere—in the window of the cottage that back up the railroad track and on the boulevard.

I can't exaggerate my admiration for our medical officer. I render him my tribute and I salute him.

PRESENTATION OF SERVICE FLAG.

J. F. Biehn, M. D.
President, North Shore Branch, Chicago Medical Society.
CHICAGO.

It is amazing when we stop to think of it, to what extent human beings are guided, inspired and cheered by emblems. We are stirred by them more often than by any other influence. They seem when our eyes rest upon them to visualize the great things that we are striving for. They serve to fix upon our minds and our hearts deeper convictions and holier devotion to great principles.

I do not mean to say that without emblems there would be no such things as lofty courage and devotion to duty and principle; but what I do intend to convey is that those things that are emblematic of love of country and of home and of the things that are dear and sweet to every American heart appeal to us all at times with peculiar force and power. I do not happen to know just who suggested the idea of service flags; but whoever it was, we owe to that person or persons a debt of gratitude. And whether the flag contains one star or many stars, whether it hangs in the window of the humblest home in the land, or whether unfurled in a great industrial institution where it contains hundreds of stars, it still has for us all the same inspiring influence.

I need hardly say that perhaps of all the professions the medical profession is contributing most liberally and loyally to the cause in which we are now engaged, and the field in which medical men offer their services is one of peculiar hardship and strain and having its own peculiar dangers. The work of the medical man in the camp and in the field calls for as high a spirit of devotion, patriotism and loyalty to his country and his flag as that offered by any other branch of the service. The only regret is that it seems in all of the armies in the world today there is a scarcity of trained medical men and their faithful allies, the trained nurse.

The North Shore Branch of the Chicago Medical Society has contributed, we believe, most liberally and loyally, to the ranks of those who have gone to the front to serve their country. And it is because of this that this flag containing now nearly 100 stars, has been made to be presented here tonight. It will, I know, be given an honored place, and this Society will not forget the men who have gone to the front and who are represented by the stars on this flag. This flag will help us to not forget them, to be diligent and alert in looking after their comfort and after the comfort and safety of the dear ones that they leave behind.

ACCEPTANCE OF SERVICE FLAG ON BEHALF OF THE ARMY AND NAVY.

Colonel Henry I. Raymond, M. C., U. S. A.
Department Surgeon, Central Dept.

Mr. Chairman, Ladies and Gentlemen: As Department Surgeon, I am delegated to accept this flag on behalf of the Army and Navy, and more especially on behalf of the medical men represented by the ninety *actual* and the ten *potential* stars on this flag, dedicated as it is to those medical officers of the North Shore Branch who have *gone* to the front, to those who may or *will go* to the front, to those who will go *back to the front*, presented by those who must remain at home to *back the front*. Your appreciation of us for our having entered the service, as evinced by the presentation of this flag, makes us strong in your strength, adds a cubit to our stature and makes us feel greater and grander than we really are. Lord Bacon before he came to fame and fortune built for himself a humble cottage in the country suitable for his needs. When Queen Elizabeth raised him to the Chancellorship, she visited him at his home and exclaimed: "Why have you built your house so small?" "It is not I, your Majesty, who have built my house too small for me, it is you who have made me too great for my house." Men of the North Shore Branch, it is you who have made us too great for our deserts.

But with such backing from the home base every soldier of us feels himself a jusqu'auboutist—one who will be in at the end when the last gun is fired, or die or be disabled in the attempt; one who knows no obstacle that cannot be overcome—who knows no sacrifice too great.

What is the meaning of each star in that galaxy? It means, if anything, that the man it represents has some ideal in life for which he is willing to die; it may be his religion or a concrete principle of conduct; it may be his love for wife or child; it may be his country. But, whatever it is, a true soldier holds within his life something that to him is dearer and sweeter than life itself. This is the spirit that animates us in accepting this flag.

We have endeavored to prepare ourselves for the contest that is ahead of us. For medical men to be ready at any indeterminate period must be *always getting ready to go*. For the cause of the medical man in war is always just; and it would be a crime against humanity for the medical department to be unprepared for any eventuality, even had there never been a war in the twentieth century.

This matter of preparedness was impressed upon my mind nearly forty years ago when an interne in Bellevue Hospital. My old professor, Dr. Austin Flint, Sr., of New York, the grandfather of the noted Flints of the present day, once said to a very sick patient possessed of much of this world's goods, which he wished to dispose of, and who was anxious to prepare for the next world, but only in case death were *really approaching*—like some of us medical men perhaps a few years back, who were anxious to prepare for some medical or other crisis in the affairs of the nation, but only in case war was *really approaching*—and Doctor Flint, not wishing to unduly excite the apprehensions of his patient for fear of extinguishing the last ray of hope for his recovery, with infinite tact said to him: *"My dear sir, it is better to be prepared and not go, than to go unprepared."* Snatching somewhat of the wisdom and infinite tact of that Nestor in Medicine, I have often repeated to myself the lesson of those words, and I conscientiously believe that I have been preparing for the present war from that day to this. *It would appear that it almost antedates the German preparation!*

But, with all our preparations. we have our deficiencies. We are not faultless; we are human. But when conditions are *imperfect*, shall we be dreamers only and with the mere theorists consider that the highest use of knowledge is to bring about an *ideal* condition, in order to secure some advantage; or shall we, with the practical men of affairs, consider that the *"true use of knowledge is to derive all possible advantage from the condition that exists."*

Hence it is that with all our imperfections, striving after better conditions, and with an unfaltering faith in the justice and in the ultimate outcome of our cause, we propose to go forward; and with heartfelt thanks we accept tonight this flag from your hand.

We accept it as a token of your appreciation for what we have done; we accept it as an earnest of what we shall do; we accept it as *a flag of defiance to his Satanic Majesty of Potsdam;* and we accept it as an *endearing emblem* of the Christianity that *still* is in man and of the humanity that is in Christ.

AMERICA'S PLACE AND PART IN THE WORLD'S WAR.*

RT. REV. C. P. ANDERSON, D. D.
Bishop of Chicago.

Mr. Toastmaster, Ladies and Gentlemen: For some years past I have done considerable public speaking on all sorts of occasions and before all sorts and conditions of people. This is the first time, however, that I have had the distinction of addressing a body of physicians.

When to the large number of physicians present there is added a large number of the wives of the physicians, there is created in the mind of the speaker a condition of mental hazard which may cause him to foozle his speech. It does not require much skill to address a body of men, but it requires a higher order of intelligence than I possess to speak acceptably to a body of women.

The nearest that I have ever come to addressing physicians was on an occasion many years ago when I was asked to preach a sermon to medical students. Most of you know what a hopeless task that is. My chief difficulty was in finding something of special uniqueness and appropriateness to that particular group. There was, of course, a text ready to hand, but the text bore more directly upon full fledged physicians than on the more innocent students. The text runs as follows: "If a man sins against his maker, let him fall into the hands of the physicians." This was doubtless the worst anathema that the writer could pronounce. It perhaps ought to be said that these words come from those apocryphal writings which are of doubtful authority and they may have been interpolated by some man—not the last man—who was victimized by members of your profession.

Recently I was telling a woman about preaching a sermon in the Bridewell. She was a woman of wealth and fashion and a member of one of our large congregations. "What can you find to say to such people?" she inquired. "Madam," I replied, "I preached the same sermon in the jail in the afternoon that I preached to you in the

* Address before the North Shore Branch, Chicago Medical Society, at patriotic dinner and dedication of service flag, Feb. 16, 1918, at Edgewater Beach Hotel.

morning." So it is that whether we are in jail or out of jail, whether we are rich or poor, whether we are doctors or laymen, whether we wear the picturesque uniform of Colonel Raymond at my left or the civilian clothes of those in front of me—underneath all these externals we are simply men and women. Ninety-nine per cent. of human life and experience, of human joy and sorrow, is common to us as men and women, and only about one per cent. is unique. I shall undertake, therefore, to say little of special appropriateness to doctors. I can put it all in a couple of sentences.

First, I am happy in being associated with a profession that has done such signal service to humankind, a profession which in our own day and in our own country has produced such men as Osler, Hugh Weir Mitchell, Trudeau and Favill and many others who have not only adorned their profession, but have enriched human life.

Second, magnify your office, and when you have magnified your office to the limit, magnify the man behind it. It was said of someone that he was born a man and that he died a mere M. D. Oliver Wendell Holmes once said (I cannot recall the precise words) that when doctors will take what they will give and lawyers give what they will take and preachers practice what they preach, then, put on your ascension robe. All professional men are in danger of becoming over professional. We are apt to become stereotyped and mechanical and coldly formal and lose sight of the personal equation and the human touch and the consciousness of those spiritual capacities and emotions which give dignity and sweetness to life.

This is a patriotic occasion and my theme is "America's Part in the War." If we were to take a composite citizen or an average citizen and trace his mental processes during the last three and one-half years we should probably find him soliliquizing in some such way as this:

If necessary, the United States can raise an army of two millions of men. With such an army our country is safe. I can fold my arms in peace. Later on, he would say: We also need a great navy, we need ships to carry our goods to the uttermost parts of the earth. We need a navy to protect our shores. We have the ability to produce such a navy. We need have no fears. And once more he folds his arms in peace.

Later on the thought occurs to him that the army and navy must have eyes, eyes to see where they are going and what the enemy is doing. Men like Admiral Peary were enlightening the country as to the needs of an air fleet and our average citizen began to wake up and see the need of thousands of aeroplanes and aviators.

About this time conscience began to dawn on our average citizen. Is it sufficient to have an army and navy and an air fleet? What about the character and the calibre of the men in the service? What about their patriotism, their spirit, their loyalty, their devotion, their capacity for service? Great nations have declined and fallen —not because their armies became depleted nor because their ships ceased to be able to control the seas, nor because the treasury became empty and the taxes too high, but because certain immoralities, certain conditions of moral anemia, against which no nation can stand up, had crept into the lives of the people. We must then have our soldiers, sailors and aviators, but they must also be men who have the strength of purity and the victory of self-control.

Then our average citizen goes a step further in the development of his national conscience. Can we keep out of this war? Can a nation be a mere onlooker at a colossal tragedy, a sharer in the spoils, but not a sharer in the sacrifices, without losing its soul? Are we not in danger of losing our moral fibre and our spiritual manhood and our capacity for high ideals?

So he reaches a point of readiness to respond to the high and holy call of duty. "We must," he says, "create an army and a navy and an air fleet and a fine morale amongst the men. But what if our men get wounded or fall a prey to the ravages of disease? This brings us to the specific service of your profession. It brings before our mind the Red Cross in all its activities, the noble band of women engaged in nursing, the doctors employing their skill to prevent wastage in human life and to alleviate suffering.

So our average citizen went from one stage of conviction to another until he reached the point of unswerving loyalty to the cause to which our country is committed. He is now one of many millions who are recognizing the need of men for the army and for the navy and for the air and for the farms and for industries and for every branch of service that will contribute to the victory of a righteous peace. Each branch of the

service must be ready to do honor to every other branch.

The Toastmaster referred to the fact that my son was in aviation in France. In a recent letter he spoke of his job as being the easy one and said I should take off my hat to the men in the trenches. So let each branch of the service, military and civilian, take off its hat to the other. I take off my hat tonight to the medical profession. I salute your service flag. I honor the men that have gone into that necessary branch of service. Well may we give three cheers to the doctors and the nurses.

Our part in the war is to dedicate the life and structure and manhood and resources of the nation to our cause. It is our part to emulate the splendor of France, the courage of Belgium, the persistency of England, the daring of Australia, the sacrifice of Canada. Nations, like men, are known by the company they keep. We are not ashamed of our company.

There were those who thought that we ought not to go into the war. There were others who thought that we should have gone into it at an earlier day. Putting these two things together it is fair to assume that those who are at the center of our administration were in possession of more facts than those at the circumference and that there is an extreme probability that the nation entered the war as soon as there was sufficient assurance that the strength of the country would demand it. What a splendid record has been made since the declaration of war in April, 1917? The manner in which the draft bill carried in our legislative bodies with something approaching unanimity, the manner in which our citizens have responded to the draft, the manner in which billions have been subscribed for Liberty Loans and millions for Red Cross and Y. M. C. A. work and other philanthropic agencies, the manner in which professional men and business men have volunteered their services in the hour of need, the manner in which a homogeneous nation is being formed out of our heterogeneous groups, the manner in which the bulk of our citizens has given allegiance to one cause, one country, one flag—all this is a really thrilling story.

What are we fighting for? It would take a long time to give a complete answer to this question. Let me confine myself to one single thing. We are fighting for the maintenenance of our ideals of civilization. We have ideals. It is frequently said that the American people are sordid and materialistic and earthly, and that they worship the almighty dollar more than the Almighty God. Ladies and gentlemen, it is not for me to try to conceal our many sins. We have them. Nevertheless, as a people, we do stand for ideals. There is probably no nation in the world today more devoted to idealism than the American nation. Let me give you some illustrations:

When the Boxer indemnity was paid, it was returned. By all the traditions of centuries it was ours to keep. It was returned in a spirit of Christian magnanimity and without protest on the part of the people. When Cuba was delivered out of the hands of a bully, it was set free. By all rules of international law, by all the precedents of the past it was ours to have and hold and to keep and to exploit, but it was set free. The Philippine Islands came into our possession. Again by all precedents of history it was ours, but no political party has made any further claim than that our responsibility does not end until their ability for self-government begins.

The American nation has always found its highest well being not in a close calculation of material advantages but in an almost reckless devotion to lofty principle. It has never been obliged to adopt Stephen Decatur's motto, "My country may she always be right but my country right or wrong." Personally, I won't stand for that sentiment. There are times when there are higher virtues than patriotism. Patriotism, as Dr. Johnson said, is sometimes a refuge for scoundrels. We have not been obliged to adopt the above motto because in all our international dealings and in all our great crises we have been in the right. The American nation was born in a struggle for the ideal of political liberty. The Civil War was fought for the ideal of human freedom. The Spanish War was fought for the ideal of humanity. Now the American nation is in a crisis where all these ideals are threatened. We are fighting for political liberty as much as our forefathers did in the American Revolution. We are fighting for human freedom as much as our fathers did when they set the negro free. We are fighting for humanity as much as our army did when we were rescuing Cuba from brutality. All these issues are at stake in the present war. We should be a despised nation, and deservedly

so, did we not rise in all the might of a clear national conscience and say: "In the name of our God we have set up our banners."

We are fighting for our ideals of right and wrong. We hear much about democracy in these days. Our President has said that it is a war on our part "To make the world safe for democracy." It is also a war to make democracy safe for the world. A democracy whose leaders are not honest men, a democracy in which the heart of the people does not beat true would become the worst of all possible tyrannies. Our hope for democracy lies in the fact that in the long run and in the last analysis the judgment of the people is sound and true. It is this sense of the difference between right and wrong which has led the rank and file of our people to support this war. It is not primarily a question of international law, or of European boundaries or of European governments. Those do not concern us here in America. Our people have been asking themselves: "Is such and such a thing right or is it wrong?" Was it right or was it wrong that the Belgian treaty should have been violated? When two men make a contract with each other and one of them violates his contract, is not the foundation of human relations undermined in that instance? When nations enter into a treaty and one nation violates the treaty is not the foundation of international relations undermined? Was it right or was it wrong? Was it right or wrong that the Belgian civilian population should have been deported into industrial slavery? Surely a nation which fought and bled for human freedom will not hesitate in answering that question. Was it right or was it wrong to slaughter nearly a million Armenian men, women and children? Was it a military necessity or was it an unjustifiable wholesale massacre? Was it right or was it wrong to try to promulgate a Holy War against Christians on the part of Mohammedanism? Was this a military necessity or was it the base treachery of a Christian monarch? Was it right or was it wrong to try to involve Japan and Mexico in a war with the United States by intrigue and by lying? Is that conception of the state which overrides individual morality and instigates and justifies barbarous immoralities—is that conception of the state which makes might right, and puts physical force above spiritual force—is that conception right or wrong?

So we might go on. These are the questions which our people have been asking. The war is a conflict of ideals. We must fight for our ideals or else abandon them. In such a crisis let us rise as one man and swear by the Holy God—not the war god Thor, not the god of Potsdam, not the god of Nietsche, who said that the enemy's program could not be carried out until Christianity was driven out of the world—but the God of our fathers, that this power which has sprung at the throat of an unsuspecting world, which has devastated and ruined monuments of a Christian civilization, which has massacred its thousands of men, ravished its thousands of women, shall find no footing on our American shores, shall not destroy our cities, shall not corrupt and prussianize our civilization, shall not ravish our women, shall not enthrone its doctrine of might in the world; and that government of the people, for the people and by the people shall not perish from the earth.

YOUR COUNTRY NEEDS YOU

Col. Robert E. Noble, Medical Corps of the U. S. Army, Washington, D. C., says: "We need medical officers, more medical officers, and yet more."

In a letter of recent date, Colonel Noble as head of the Personnel Division of Surgeon General's Office re-affirmed the above statement, and says "It is hard to get physicians to realize the extent of the demand that will be made upon the profession."

It is the patriotic duty, therefore, of every able-bodied physician between the ages of 22 and 55 to do his "bit" by applying for a commission in the Medical Reserve Corps of the Army.

This does not mean that every one will be called to give up his practice and leave the city, but it does mean that the Surgeon General's Office can index each man according to his ability, and use him whenever needed. We want particularly the young men between 22 and 30. Theirs is the opportunity of a lifetime! Instead of trying to explain the rest of their lives how it happened that they did not respond to the call, they will have the proud consciousness for all time to come of having done their duty and demonstrated their loyalty and patriotism.

Communicate by letter with the undersigned for further information.

E. J. Doering, Major, M. R. C.,
President Board of Medical Examiners, U. S. Army,
81 East Madison street, Chicago.

$100 PRIZE

The American Association of Industrial Physicians and Surgeons offers a prize of $100 for the best thesis on any subject related to Industrial Medicine and Surgery by any undergraduate medical students of the United States.

The thesis must not contain more than 5,000 words.

All theses must be in the hands of the Secretary of the Association by May 1, 1918.

Harry E. Mock, M. D., Secretary,
122 S. Michigan Avenue,
Chicago, Ill.

ANNOUNCEMENT ANNUAL MEETING EYE, EAR, NOSE AND THROAT SECTION, AT SPRINGFIELD, TUESDAY, MAY 21 AND WEDNESDAY, MAY 22, 1918.

The officers of the Section of Eye, Ear, Nose and Throat have completed all the arrangements for the coming meeting of the section at Springfield, Tuesday and Wednesday, May 21 and 22, 1918. From every standpoint this meeting will surpass any of the meetings heretofore held.

Tuesday, May 21, 1918, will be Clinic Day. The entire clinical program will be carried on at St. John's Hospital, beginning at 9 a. m., adjourning at 12 o'clock for luncheon, which will be served at the hospital, and resuming promptly at 1:30 p. m., continuing until 5 p. m. The local clinical committee at Springfield have already under way a clinical program which will in variety and from an operative standpoint command the interest of every member of the section. Some of the most distinguished members in our specialty will perform operations and make demonstrations of interesting clinical cases. The members are urged to present any case of interest to the section on this occasion.

Tuesday evening, May 21, 1918, at 6:30 p. m., the annual banquet will be held at the New Leland Hotel. We are not at liberty to state the program which is being prepared for this event, as we are pledged by the local committee to secrecy. We are only permitted at this time to announce that it will be a Gala Event, that no banquet heretofore given by the section will approach the coming one from an oratorical, musical, general entertainment and epicurean standpoint. In confidence we *urge you not to miss this delightful affair.*

Wednesday, May 22, 1918, will be devoted to reading of papers. The program will begin promptly at 9 a. m., and continue until 12 o'clock, resume at 1:30 p. m., continue until 5 p. m. The officers have prepared a strong and splendid program, both essayists and subjects have been selected with unusual care. No effort has been spared to present a program of wide range and scientific value covering the most interesting and important phases of progress in our specialties. In addition to the reading of papers a special time has been allotted to presentations of pathological specimens, microscopical demonstrations, instruments and devices. Any member who desires to make such a demonstration is requested to communicate at once with the secretary or chairman.

It is the earnest hope of the officers of the section that the attendance at the coming meeting will surpass that of any meeting heretofore held.

The officers of the section and local committee at Springfield have with enthusiasm and earnestness made every preparation to make this meeting the banner meeting of our section, and their preparations for the clinic, banquet and scientific program have been carried out with the certain idea that this standard will be attained. It only remains for the section members to show their co-operation by their attendance and interest in order that this result may be obtained.

J. Sheldon Clark, Chairman,
76 Stephenson Street,
Freeport, Ill.
Wesley H. Peck, Secretary,
1102, 31 N. State Street,
Chicago, Ill.

AMERICAN MEDICAL ASSOCIATION.

The Chicago Session.

ADVISORY COMMITTEE ON SCIENTIFIC EXHIBIT.

In order to secure desirable material from various sources for the Scientific Exhibit at the coming meeting, an Advisory Committee on Scientific Exhibit has been appointed, consisting of Dr. Harlow Brooks, New York; Dr. A. S. Warthin, Ann Arbor, Mich.; Dr. George L. Dock, St. Louis; Dr. L. B. Wilson, Rochester, Minn.; Dr. E. R. LeCount, Chicago; Dr. Oskar Klotz, Pittsburgh; Dr. F. P. Gay, Berkeley, Cal.; Dr. C. C. Bass, New Orleans; Dr. W. M. L. Coplin, Philadelphia; Dr. Joseph C. Bloodgood, Baltimore, and Dr. Walter B. Cannon, Boston.

The Scientific Exhibit will occupy the mezzanine of the Hotel Sherman. This will also be the general headquarters of the Chicago session. The available space seems ample, but in order to arrange the space to the best advantage it is desirable that the director of the Scientific Exhibit know early what to expect. Applications should be made at once. Assignment of space will be made Tuesday, April 2, 1918, and all applications must be received before that date.

Those desiring to exhibit work may secure application blanks and further details by addressing Dr. George H. Weaver, Director of Scientific Exhibit, 637 South Wood Street, Chicago.—*Journal A. M. A.*

FATALITIES IN COAL MINES.

During 1917 in the United States 2,695 men while mining coal were killed. This is an increase of 470 over the fatalities in 1916. This increased death rate, according to the Bureau of Mines, is due to the demoralization of the coal mining industry by war-time conditions. Many foreigners returned to their native countries to engage in the war. This necessitated new men, which were generally inexperienced men, to fill their places. Spasmodic flurries in the coal business have also had their share in increasing the death rate in an industry which has always had a high mortality ratio.

MISSISSIPPI VALLEY SANITARIUM ASSOCIATION.

The Mississippi Valley Sanitarium Association will meet at the Chicago Municipal Tuberculosis Sanitarium, on March 12 and 13.

PROGRAM

March 12—Forenoon

SYMPOSIUM, SANITARIUM ADMINISTRATION

Subject: "Place of the Laboratory in the Sanitarium," by Dr. Maximilian Herzog, Director of Laboratories, Municipal Tuberculosis Sanitarium.

"Practical Graduated Exercise," by Dr. J. Schlesinger, Senior Physician, Cook County Tuberculosis Hospital.

"Education of the Tuberculous Our First Duty and Opportunity," by Dr. Everett Morris, Head Physician Cook County Tuberculosis Hospital.

Afternoon Session

"The Effect of War on the Tuberculosis Sanitarium," by Dr. Eugene B. Pierce, Superintendent Michigan State Sanitarium.

"Is Temporary Construction of Buidings for the Care of the Tuberculous Practical," by a Minnesota physician, to be named later.

Business Session

The evening session to be addressed by Health Commissioner John Dill Robertson, "Suppression Vs. Repression of Tuberculosis in the Community." Discussion of the subject by Dr. W. A. Evans, former Health Commissioner of Chicago.

Wednesday, March 13

Entire day to be devoted to a Symposium on the Tuberculous Child as follows: Forenoon: "How Shall We House the Tuberculous Child," by Dr. Stephen A. Douglass, Superintendent Ohio State Sanitarium.

"Shall the Sanitarium Handle the Contacts," by Dr. John Ritter, Assistant Professor of Medicine, Rush Medical College, Chicago.

"Differentiation of the 'Potentially' Tuberculous Child from the Active Tuberculous Child," by Dr. E. C. Riebel, Physician Chicago Open Air Schools.

Afternoon Session

"Looking Forward into Tuberculosis Sanitarium Work," by Dr. Alfred Henry, Indianapolis, President Mississippi Valley Tuberculosis Association.

"Primary and Secondary Pulmonary Tuberculosis," by Dr. Kennon Dunham, Cincinnati, especially emphasizing the X-Ray phase of the subject.

The officers of the Mississippi Valley Sanitarium Association are:

Dr. J. W. Pettit, Ottawa, Illinois, President;

Dr. Robinson Bosworth, St. Paul, Minn., Vice-President;

Dr. W. H. Watterson, Secretary and Treasurer.

This is the first mid-winter session of this Association, which was recently organized at Louisville, Kentucky, and is affiliated with the Mississippi Valley Sanitarium Conference.

W. H. WATTERSON,
Medical Superintendent.
Secretary Mississippi Valley Sanitarium Association.

ILLINOIS PREPARING FOR LIBERTY LOAN.

The fifty-seven counties of northern and central Illinois lying within the Seventh Federal Reserve District are making rapid progress in the work of organizing for the third Liberty Loan campaign. Heman Gifford, Federal Reserve Director of Sales for Illinois, is confident that the state of Lincoln and Grant will be found to have gone "over the top" when final tabulations of war-bond subscriptions are made. The pre-campaign enthusiasm thus far shown is of one variety—not fifty-seven—and Mr. Gifford believes that this enthusiasm given vent through practical channels will result in the expected aid to the Government in its prosecution of the war for the freedom of the world.

"We have appointed chairmen in forty-five of our fifty-seven counties," said Mr. Gifford, in outlining the organization work," and we expect to select the remainder within the next week or ten days. Our chairmen already have held meetings in a number of counties and are reporting to us complete organization of their township committees.

"Illinois did not subscribe its full share of either the first or second Liberty Loans. In the last campaign we fell approximately $20,000,000 behind. We are now approaching a further test of our patriotism which will be even more severe. Our committees will go into the new campaign fully realizing their task, but firm in the belief that the patriotism and loyalty of the people of Illinois will accomplish the desired result.

"It has been charged that the farmers of Illinois have not given full support to Liberty bonds. While this undoubtedly has been a fact in many localities, our records show that in counties where the campaign was well organized subscriptions from farmers were excellent, and we feel confident that this time, with better organization everywhere, they will be greatly increasd.

"The same situation exists in communities where there are many people of German ancestry. During

the first campaign subscriptions from these communities were very small; yet many of the people subscribed their full shares in the second campaign. The issues involved in the war have now become more clear, and we are confident that every community of this kind in the state will welcome the new opportunity to give practical expression to its Americanism."

Society Proceedings

COOK COUNTY

Chicago Medical Society.

Joint Meeting of the Chicago Pathological Society and the Chicago Medical Society, Feb. 6, 1918.

Bovine Tuberculosis, Its Diagnosis and Control—V. A. Moore, Dean of the New York Veterinary College at Cornell College.

Regular Meeting, Feb. 13, 1918.

1. The Medical Situation at Camp Grant.—Major Wm. L. Baum, Camp Grant, Ill.
2. Problems of the Medical Officer of the Navy.—Medical Inspector H. E. Odell, U. S. N., Great Lakes, Ill.
3. Method of Controlling Communicable Diseases at Camp Custer.—Major James F. Edwards, Camp Custer, Mich.
4. Points in the Epidemiology of Meningitis.—Surgeon O. J. Mink, U. S. N., Great Lakes, Ill.
5. Pneumonia.—Major Jos. L. Miller, Camp Dodge, Iowa.

Regular Meeting, Feb. 20, 1918.

1. Suppuration of the Attic of the Middle Ear.—Otto T. Freer.
   Discussion—W. G. Reeder.
2. Major Plastics of the Abdominal Wall.—Weller Van Hook.
   Discussion—Bayard Holmes.
3. Plastic Surgery.—Lawrence Ryan.
   Discussion—T. A. Davis, Ed. H. Ochsner.
4. Building Character in the Army.—Allen D. Albert, Representing War and Navy Dept., Com. on Training Camp Activities.

Regular Meeing, Feb. 27, 1918.

SYMPOSIUM ON BILIARY SURGERY.

1. Medical Aspects of Diseases of the Bile-Tract.—Edward F. Wells.
2. Secondary Operations on the Biliary Tract at the Mayo Clinic.—E. Starr Judd, Rochester, Minn.
3. The Technic of Opening the Common Duct.—(Illustrated by Motion Pictures.) Daniel Eisendrath.
   Discussion—A. J. Ochsner, A. D. Bevan and J. B. Herrick.

The attention of the members of the Society is called to the announcement on the next page of the dinner to be given in honor of Dr. E. Starr Judd of the Mayo Clinic.

MADISON COUNTY

Our February Meeting.

The Madison County Medical Society met at the Elks' Club in Granite City on February 1, 1918, with President Dr. J. H. Siegel in the Chair.

Twenty-four members and two visitors were present. Dr. Groves Blake Smith was elected to membership.

On motion of Dr. W. H. C. Smith, the secretary was instructed to prepare a petition to be presented to our supervisors, asking that the proposition to secure a county tuberculosis sanitarium under the Glackin Law be submitted at the next general election.

Dr. R. D. Luster, executive secretary of Red Cross seals, made a report on the sales of 1917, which was ordered published and a rising vote of thanks was given to Dr. Luster. Dr. Luster was requested to write a letter conveying the thanks of this society to each individual helper in the Red Cross Seal Campaign. Dr. Henry Schwarz of St. Louis then gave a most instructive address on "Cancer of the Uterus," and the possibility of cure if taken at its earliest stages. He fully discussed the use of radium and x-ray. After a most thorough discussion a vote of thanks was tendered the distinguished speaker. Also a vote of thanks was given to the Elks for the use of their commodious club rooms.

Our service flag, now containing twelve stars, is displayed at every one of our monthly meetings. This means that over 12 per cent. of our members are now in government service. Attached to the flag is the roll of honor on which is placed the name, rank and present address of each man who has answered his country's call.

The Government is still calling for competent physicians and surgeons and our men are ready to obey the call when it comes. The time is not far off when the number of stars on our flag will and must be doubled.

RED CROSS SEAL CAMPAIGN, 1917

Dr. R. D. Luster, executive secretary of the Red Cross Seal Campaign for 1917, submits the following statement as the result of his efforts. As will be seen by the figures, a great gain was made over the amount secured in 1916, and Dr. Luster and his force of distributors deserve the thanks and appreciation of our Society for the remarkable success that crowned their efforts.

RED CROSS SEAL STATEMENT.

Sold to distributors	$3,080.52
Sold to Dr. Fiegenbaum	20.00
Sold by rural school children	376.60
Sold to unknown parties	.15
Total	$3,477.27
Sent to State Society, 22½ per cent	782.39
Retained in local treasury	$2,695.88

COMPARISON.

347,727 seals sold in 1917	$3,477.27
160,214 seals sold in 1916	1,602.14
Gain over last year	$1,875.13

PIKE COUNTY

The Pike County Medical Society met at the office of the secretary in Pittsfield on January 31, 1918.

Owing to the weather conditions and the busy season, only a few were present as compared with the usual attendance. However, this was compensated for the lively interest taken in the problems of quarantine and other matters of much importance to the people as well as the profession. The chief topic, as already indicated, was the new quarantine laws of Illinois. This subject was brought forward by Dr. F. N. Welk of Pittsfield and ably presented, and further discussed by all members present. So much interest was taken that it was nearly 6 p. m. before the Society adjourned.

A paper to be presented by Dr. L. Lacy of Pittsfield had to be deferred to some future time. The next meeting of the Society will be at Pittsfield, when it is expected a very large attendance is assured.

W. E. Shastid, *Secretary.*

ST. CLAIR COUNTY

The annual meeting of the St. Clair County Medical Society was held at the Elks' Club, East St. Louis, on Thursday, January 10, 1918. The vice-president, Dr. Walter Wilhelmj called the meeting to order.

A communication from the secretary of the State Society, in regard to the payment of dues in the State Society of those members now in the army, was tabled on account of the deplorable condition of the treasury. A committee was appointed to investigate why certain information asked by some insurance companies in regard to the family history and other conditions of their clients should be given by members of this Society.

Inspector J. W. Follmer, for the Board of Registration and Education, addressed the Society, outlining the work he has done in this county. Mr. Follmer is an energetic and very efficient officer, and was highly complimented for his excellent results.

The yearly report of the secretary-treasurer was read and aproved.

The following officers were elected for the ensuing year: President, Dr. Walter Wilhemj; vice-president, Dr. J. H. Grum; secretary-treasurer, Dr. A. E. Hansing, re-elected all by acclamation. Board of Censors: Drs. R. L. Campbell, Harvey T. Smith and L. J. Wiggins. Program Committee: Drs. A. E. Rives, J. W. Rendleman and C. S. Kaggs.

Dr. R. L. Campbell read a very interesting and highly scientific paper and reported cases on heart block. The paper was discussed by the members present.

A. E. Hansing, *Secy.-Treas.*

Personals

Dr. and Mrs. Hugh T. Patrick, Chicago, are spending the winter in California.

Dr. and Mrs. C. W. Cargill, of Mason City, are spending the winter in St. Petersburg, Florida.

Major John M. Dodson has succeeded Dr. Frank Billings as medical aid to the governor of Illinois.

Dr. George D. J. Griffin, Chicago, was refused a commission in the M. R. C., on account of defective vision.

Dr. Travy Hamilton Clark has been appointed president of the medical section of the National Fraternity Congress.

First Lieut. R. C. Dienst, M. R. C., of Aurora, is in the aviation section, U. S. A., and is located at Camp Dallas, Tex.

Captain, Medical Corps—George L. A. Dale, 30 North Michigan avenue, and Louis J. Pritzker, 4817 Sheridan road.

Dr. A. A. Lowenthal, of Kankakee and Chicago, and family went to Los Angeles, early in February for a long stay.

Dr. Howard Knight, Elgin, has been commissioned in the Medical Reserve Corps and is located at Camp Dodge, Iowa.

Drs. Bernard J. Kulasaviez and Patrick T. McCarthy, of Chicago, were commissioned first lieutenants, M. R. C., Feb. 20.

Dr. Frank Smithies has been appointed associate professor of medicine in the School of Medicine of the University of Illinois.

Dr. Arthur S. Campbell, Cook County Tuberculosis Hospital, Lake Forest, was commissioned first lieutenant, M. R. C., Feb. 14.

Dr. W. E. Kendall, of New Holland, has been commissioned captain and surgeon of the 131st infantry at Camp Logan, Houston, Tex.

Dr. Anton Mueller, Chicago, has been appointed an instructor in the First Aid Division of the American National Red Cross, Chicago Chapter.

Dr. William W. Quinlan, medical referee of the Mutual Life Insurance Company of New York, has been made supervising referee of the company for the territory west of Chicago.

Major Kellogg Speed, M. R. C., U. S. Army, is reported making satisfactory progress toward recovery from a severe gas bacillus infection received November 8, while performing an amputation.

Capt. W. S. Brown, M. R. C., who spent several months in training at Camp Dodge and Fort Riley, has been discharged from the service for

physical disability and has resumed practice in Elgin.

Dr. James M. Hancock, Chicago, is recovering from severe shot wounds inflicted by robbers February 2. The doctor was passing in his auto when the robbers were trying to escape from the police.

Dr. Bernice Curry, of Bloomington, has been appointed medical director of the tuberculosis dispensary which opened January 2. The building of a tuberculosis sanitarium will be begun in the spring.

Lieut. Karl J. Henricksen, M. R. C., assigned to the Twentieth Engineers, who was formerly on duty in the office of the attending surgeon, Chicago, was one of the rescued passengers of the ill-fated Tuscania.

Dr. W. T. Dowdall, East St. Louis, surgeon for the Illinois Central Railroad, has been given a Captain's commission in the Medical Reserve Corps of the United States Army. We have not learned to what station he has been attached.

Capt. James H. Williamson, M. R. C., of Danville, is said to be the fourth physician from the Temple building to receive commissions. The others are Dr. H. S. Babcock, now with Battery A in France, Dr. Francis Barton and Dr. Melvin Hole, both at Fort Riley, Kansas.

The following members of the McLean County Medical Society are in the military service: Drs. R. A. Noble, A. R. Freeman, Harry L. Howell, A. E. Rogers, T. D. Cantrell and W. H. Gardner of Bloomington; M. Wallis and E. M. Sayers of Normal; and E. R. Herrman of Stanford.

Dr. Frank R. Morton, secretary of the North Shore Branch, Chicago Medical Society, is chairman of a committee to solicit funds from physicians for a war recreation fund. One object of the fund is the maintenance of a club house for soldiers and sailors. Other chairmen will represent other professions and industries.

Dr. A. C. Armbruster of Collinsville, after a training course at Ft. Riley, Kan., and a further course of instruction at Camp Bowie, Fort Worth, Texas, was promoted to the rank of Captain. On his final examination he was honorably discharged by reason of underweight and has resumed his practice in Collinsville.

Five Chicagoans were given commissions in the Officers' Reserve corps by the war department Feb. 7, as follows: Major, Medical Corps—Dr. Rollin T. Woodyatt, 104 South Michigan avenue.

1st Lieut., Medical Corps—Dr. Henry S. Bleese, Illinois Steel Company hospital; William J. Quigley, 5000 West Monroe street; George W. Scrupham, Cook county hospital.

First Lieut. W. J. Rideout, M. R. C., of Freeport, has been assigned to temporary duty at the base hospital at Camp Hancock, Augusta, Ga. Members of the Stephenson County Medical Society, the school board, directors of the Stephenson County Red Cross chapter, of which he is president, church friends and the high school band gave him an ovation, testifying to their high regard for him as a physician and neighbor for the past twenty years.

Dr. Alice Barlow Brown, Winnetka, has been in France for several months looking after the women and children back of the fighting line on the western front. The funds for Dr. Brown's work have been raised by Winnetka people through the chart system and the gift shop that has been established. A Winnetka dispensary has been established back of the lines near Toul, and at Toul and Nancy, Dr. Brown looks after more than 300 women and children a week.

1st Lieut., Medical Corps—Walter D. Bayard, 735 Fullerton avenue; Jesse O. Bailiff, 324 Stanley terrace; Bernard Benkendorff, 1535 North Kostner avenue; John T. Brosnan, 4910 Washington boulevard; Francis V. Carberry, 3800 Prairie avenue; Blaine Claypool, Wesley Memorial hospital; Michael A. Galgano, 1201 West Grand avenue; Henry G. Lescher, 4900 Thomas street; Thomas P. O'Connor, 3324 West Monroe street; Eugene B. Perry, Michael Reese hospital; John L. Webb, 2814 Ellis avenue; Gustav W. Lawson, 5201 North Clark street; William H. Taylor, 4458 North Kedzie avenue.

News Notes

—More than 8,000 women physicians are said to have enlisted in the volunteer medical service corps.

—"Dr." Pierre Koglowski, said to belong to the ancient and ignoble order of Chicago quacks, was arrested by the federal authorities for disloyalty.

—The St. Paul Medical Journal has been discontinued to clear the field for *Minnesota Medicine*, the Journal of the Minnesota State Medical Association.

—Prof. H. C. Sherman of Columbia University gave an address on "Fundamental Requirements in Human Nutrition" before the Institute of Medicine of Chicago, February 27.

—Dr. Thomas Balhatchet and Dr. Charles W. Clark, of Chicago, arrested in connection with the death of a woman from an operation, were released by the verdict of a cononer's jury.

—Nineteen cases of smallpox have occurred recently in the Bethany Bible School of the Church of the Brethren. Smallpox is no respector of anyone's "belief" in vaccination, but it never tackles the vaccinated.

—Miss Julia Lathrop, chief of the Children's bureau of the department of labor, has a plan for saving the lives of 100,000 babies this year. The quota for Illinois is said to be 5,625. Here's strength to her arm!

—It is reported that the Jenner Medical College and the Chicago Hospital College of Medicine have been merged and that the two institutions are now located at the site heretofore occupied by the latter.

—At the annual meeting of the Otological, Laryngological and Rhinological Society, Dr. Frank Allport was elected president; Dr. Charles H. Long, vice-president, and Dr. Edward P. Norcross, secretary-treasurer.

—A report from a high army official recently returned from France is to the effect that hospital unit No. 12, headed by Dr. F. A. Besley, has not had a single case of violation of regulations since going into active service.

—At the meeting of the physicians of Madison County in Granite City, February 2, it was decided to take advantage of the law recently passed by the Illinois State Medical Board, to petition for the establishment of a tuberculosis sanatorium for the county.

—Seven hundred citizens of Chicago, natives of Ricigliano, Italy, near Naples, presented a check for $2,200 to Judge Barasa for the Italian Red Cross ambulance, in honor of Dr. Aurelio Pagano, who left Chicago last October as a lieutenant in the Italian army.

—Ernest P. Handl pleaded guilty to practicing medicine without a license and was fined $50 and costs, Jan. 16. Mrs. Bertha Roeske, for the same offense was fined $25, Feb. 7. Martin Kraus, an alleged spiritualist, was fined $100 and costs. All these worthies hailed from Chicago.

—The state department of registration and education revoked the licenses of Drs. Leon T. Burgess, Isaak W. Hodgens and Arthur L. Blunt, February 9. Here endeth the first lesson, and it was from the "old testament." Now hurry up with the new gospel and try that on the quacks.

—Physicians, actors and clergymen, came together, February 7, at the first meeting of the Red League, held at the City Club, in a campaign to restrict venereal disease. The league has decided to open a venereal clinic at 118 West Grand Avenue, supplementing the work of the clinic recently established by the city.

—At the thirty-first meeting of the Robert Koch Society for the Study and Prevention of Tuberculosis, held February 21, at the City Club, a paper was read by Dr. Max Biesenthal on "Nontuberculous Lesions of the Lungs, Diagnosticated Tuberculous." Discussions were also held on "Clinical Findings," "Roentgen Ray" and "Complement Fixation."

—Major Horace D. Arnold, of Boston, at the meeting of the Association of American Medical Colleges, Feb. 4, advocated speeding up the courses in medical colleges to meet the urgent need of more qualified medical men. He suggested having three terms of four months each for three years, instead of spreading the course over four years with summer vacations.

—Governor Lowden held an extended conference, Feb. 18, with a delegation of public officials, including the special Chicago council sub-committee on crime, to discuss Chicago crime conditions and remedies. The conferees expressed their confidence that closer co-operation between the city courts and State officials would overcome some of the features of the parole law that have caused the courts and police much trouble. Chief Justice Olson advocated farm colonies for the permanent segregation of the mental defectives which recruit the worst type of gunmen.

—The annual meeting of the Chicago Tuberculosis Institute was held, January 31, and the following officers were elected: President, Dr.

Robert H. Babcock (re-elected); vice-presidents, Drs. Ethan A. Gray and Edwin W. Ryerson; secretary, Mr. George W. Perkins; treasurer, Mr. David R. Forgan; executive committee, Drs. Ethan A. Gray, Robert H. Babcock, William A. Evans, O. W. McMichael, Stephen R. Pietrowicz, Edwin M. Ryerson, Mrs. James L. Houghteling, Mr. George W. Perkins, Mr. Horace K. Tenney, and board of directors, Drs. George W. Babcock, William A. Pusey, Max Biesenthal and Stephen R. Pietrowicz, and Mrs. E. C. Dudley, Miss Anna Fitzgerald, Mrs. James L. Houghteling and Messrs. G. A. Ranney, Horace K. Tenney and Matthew Woll. The receipts for the year were $120,879, and the disbursements, $105,532.

—Dr. F. Truby King, superintendent of the Royal New Zealand Society for the Health of Women and Children, visited Chicago, Feb. 5 and 6, and addressed the infant welfare division of the Council of National Defense, the City Club and the nurses of the Health Department, in the Council Chamber, in the interest of more effective work in reducing the mortality of infants to the phenomenal rates prevalent in New Zealand. The credit of the low rate there is due to the society of which he is president and he attributed its success to the publicity freely accorded by the press and the very progressive and sympathetic interest of all classes of the people who vote abundant funds, enabling mothers before and after confinement to be free from work and care and providing skilled nursing and medical attendance for all classes. He advocated the instruction of girls in the duties of motherhood regardless of social standing.

—The Medical Women's club of Chicago entertained at dinner Feb. 13, in honor of the officers of the Chicago Medical society and the medical officers of the army and navy. Maj. Franklin H. Martin, M. D., M. R. C., chairman general medical board, council of national defense, and Mrs. Martin; E. B. Coolley, M. D., president Illinois State Medical society, and Mrs. Coolley; Charles E. Humiston, M. D., president Chicago Medical society, and Mrs. Humiston; William Allen Pusey, M. D., president-elect Chicago Medical society, and Mrs. Pusey; J. V. Fowler, M. D., secretary Chicago Medical society, and Mrs. Fowler; John S. Nagel, M. D., treasurer Chicago Medical society, and Mrs. Nagel; Maj. James J. Edwards, M. D., M. R. C., sanitary inspector, Camp Custer; Maj. William L. Baum, M. D., M. R. C., Camp Grant; Medical Inspector H. E. Odell, U. S. N., Great Lakes, and Surgeon O. J. Mink, U. S. N., Great Lakes, were guests of honor.

Marriages

VICTOR LUPU SCHRAGER, M. D., to Mrs. Jean Rowland both of Chicago, January 25.

FLOYD ALBERT SMITH, M. D., to Miss Edna H. McCann, both of Canton, Ill., January 1.

LIEUT. HARRY ANTHONY DURKIN, M. D., M. R. C., U. S. Army, to Miss Rose M. Fleming, both of Peoria, Ill., February 1.

Deaths

THOMAS A. LILLY, M. D., Chicago; Kentucky School of Medicine, Louisville, 1864; aged 80; physician to Secred Heart Convent and St. Joseph's Home, Chicago; died at his home, February 6.

GUSTAV A. FISCHER, M. D., Chicago; University of Prague, Bohemia, 1871; aged 72; died at his home, January 31, from cerebral hemorrhage; formerly a member of the Illinois State Medical Society.

RUFUS A. DUMARS, M. D., Peoria; University of Pennsylvania, Dept. of Med., Philadelphia, 1877; aged 68; a member of the Illinois State Medical Society; died at St. Francis Hospital, January 31, from gallstone disease.

ANTHONY JOHN JINDRA, M. D., Chicago; Northwestern University Medical School; Chicago, 1917; aged 25; an interne at the Cook County Hospital; was killed at the hospital by a shot from a revolver in the hands of Miss Paulina Plotka.

BUFORD H. WILLIAMS, M. D., Hamburg, Ill.; College of Physicians, Keokuk, Iowa, 1878; aged 72 years; a practitioner over thirty years in Calhoun county; retired from practice ten years ago. He was for some years president of the State Bank of Hamburg. Died at his home, January 23.

LIEUT. ELLSWORTH JOSIAH CARROLL, M. D., M. R. C., U. S. Army, Eureka, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1889; aged 53; who was on active service on duty at Camp McArthur, Waco, Tex., and attached to the aero squadron; died at Camp McArthur, February 13, from spinal meningitis.

MILTON H. AUTER, M. D., Galesburg, Ill.; Howard University, Washington, D. C., 1905; aged 38; a colored practitioner; formerly a Fellow of the American Medical Association; a member of the Illinois State Medical Society; died at the home of his father at Harrisburg, Pa., January 17, from the effects of a gunshot wound of the heart, self-inflicted, it is believed, with suicidal intent.